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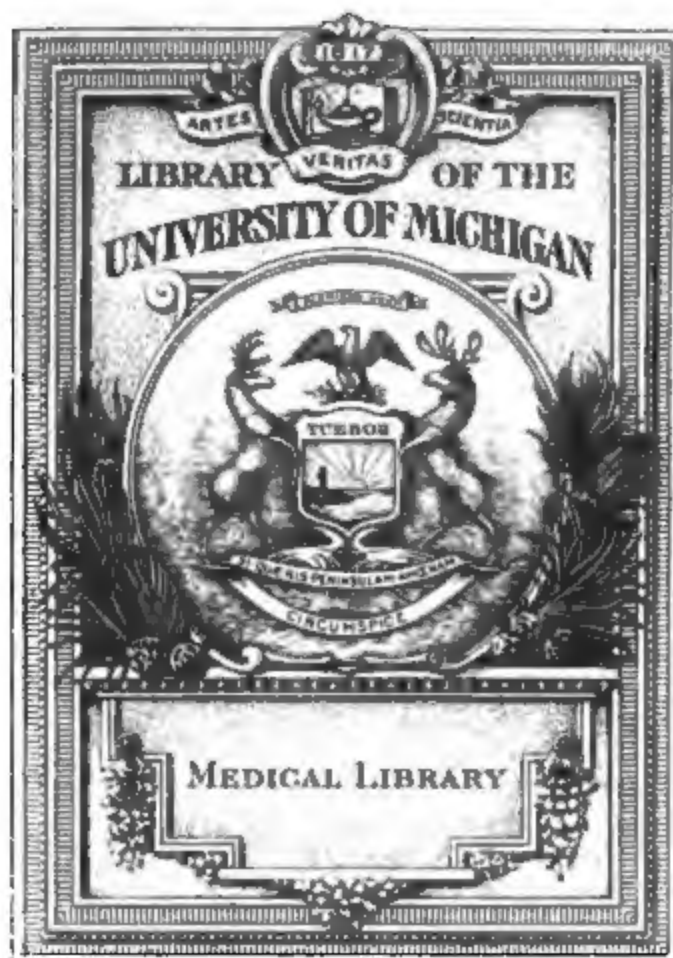
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THE
LONDON
MEDICAL AND SURGICAL
JOURNAL;

EXHIBITING
A VIEW OF THE IMPROVEMENTS AND DISCOVERIES
IN THE
VARIOUS BRANCHES OF MEDICAL SCIENCE.

EDITED BY
MICHAEL RYAN, M.D.
MEMBER OF THE ROYAL COLLEGE OF PHYSICIANS IN LONDON, &c., &c.
AND
AN ASSOCIATION OF PHYSICIANS AND SURGEONS.

Quærendo verum.—HORACE.

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VOL. VII.

LECTURES ON MEDICAL JURISPRUDENCE,

DELIVERED BY PROFESSOR A. T. THOMSON,
F. L. S.,

At the University of London; Session 1834-35.

LECTURE XV.

GENTLEMEN—When the lungs and the heart, still attached, have been wiped clean, they are to be placed in a gentle manner in the water, which should be of a temperature of 60 deg. Faht. If they float, the manner of their floating, whether near the surface, or in the middle, or near the bottom of the fluid must be noted; and whether the lungs turn uppermost; if they sink, whether they fall quickly or slowly to the bottom of the jar. The heart is next to be separated from the lungs, having tied the pulmonary vessels; and the lungs alone being placed in the water, great attention must be paid to the position which they assume, and whether they sink rapidly or slowly, or float near the surface; and what effect, in these respects, the reversing their vertical position produces: and it must also be noticed whether one part sinks more than another, for a reason which I will afterwards mention. On separating the lobes, you must also carefully note whether one lobe float and the other sink; for in the early death of a newborn child, both the lobes are not equally dilated; and we should note whether it is the right or the left lobe that sinks. On cutting the lungs in pieces, if some portions sink, it is of importance to note down not only to which lung these portions belong, but from which part of the lobe they are taken.

Such is the mode of conducting what is called the *hydrostatic test*; and from its simplicity, and the accuracy of the principles on which it is founded, one would, *a priori* imagine that no objections could be raised to the conclusions drawn from it; but this is not the case; and as this is one of those tests to which the attention of counsel is chiefly directed, it is essential that the medical witness should be perfectly aware of the

nature of these, and ready to reply to every interrogation respecting them.

The first objection is raised upon the possibility of the lungs swimming in water, although the child be not born alive, as for instance, if the mouth should present at the dilated orifice of the uterus. It has been supposed that, air being admitted per vaginam, the infant may breathe in this situation; and obstetricians, as for instance, Idena, Croezer, Schmitt, Osslander, Siebold, and Thilenius, have even maintained the possibility of a child crying in this position of things; but no British obstetrician has verified these assertions, and I do not hesitate to say that I do not believe that it ever occurred. I have even some doubts, although not so strong, respecting vaginal respiration, a circumstance in which Capuron believed. The assertion of Dr. William Hunter is of a very different stamp, that a child may breathe when the head only is protruded, and yet lose its life before the body is borne; and, in this case, if the infant "make," says Dr. Hunter, "only one gasp, and instantly dies, the lungs will swim in water, as readily as if it had breathed longer, and had then been strangled." That a child will breathe whilst the head only is protruded, is well known to almost every accoucheur: but I know of few reasons which would act so forcibly, unless violence were employed, as to destroy a child under these circumstances: still, however, it is an objection which may be brought forward to the hydrostatic test. Indeed, a well authenticated case of this kind is recorded by Dr. Hosack, and quoted in Dr. Beck's Medical Jurisprudence. We must admit the possibility of the fact, and although a portion of the lungs may be inflated, and swim in water, yet, if the examination be carefully made, and on separate portions, we will probably find that the buoyant portion is very limited. This was the cause of the swimming of the foetal lungs in the case of an infant born of a woman of the name of Margaret Dickson, who was hanged at Edinburgh, in 1728, for the supposed murder. It is a singular fact (and it almost appears like the interposition of a merciful Providence), that the poor woman, who was put into a cart after she was hanged,

to be taken to her friends at Mussleburgh, a fishing village six miles from Edinburgh, was actually resuscitated by the jolting of the cart over a rough road, and survived many years.

Another objection which has been brought forward is putrefaction. There can be no doubt that putrid lungs will float, when, from the extrication of much gas, lungs even of the foetus at six months will float; but it must be recollected that the entire body requires to be in a high state of putrefaction before the lungs can be affected, and, therefore, no error can arise from this cause: and that the lungs resist the putrefactive process much longer than any other organ of the body. It is also easy to perceive when they are in this state, by making incisions into them; for if putrefaction has taken place, it is obvious by the air-bubbles, which form, as it were, strata between the ramifications of the bronchiæ visible to the eye; which is not the case in lungs dilated by respiration. It is easy also to determine whether the gas contained in the lungs be the consequence of putrefaction or respiration, by pressing strongly a portion of the lungs, and then placing them in water: if respiration has been exercised in such lungs, the portion thus treated will float; but, if the gas be the consequence of putrefactive decomposition, it will sink. There is no crepitation in a lung under putrefaction, when it is compressed by the fingers, or cut into; and this, consequently, is another circumstance that is likely to prevent an erroneous judgment being formed.

It has been stated by one distinguished obstetrician, M. Lecieux, that when the child is extracted by the feet, and the pelvis very narrow, the lungs are apt to float in water, although the foetus had not respired, and had died during the birth. This he attributed to the lungs suffering contusion, and extravasation of blood taking place, from which bubbles of gas are disengaged, and the portion of lung consequently becomes specifically lighter.

A third objection to the hydrostatic test has been suggested by Dr. William Hunter, whose great humanity led him anxiously to find out circumstances which might operate to the advantage of women accused of infanticide. Dr. Hunter imagined that the lungs might be artificially inflated, either by the mother herself, or by others who may have "a diabolical intention of bringing about the condemnation of the mother." If the lungs of an infant be thus inflated, there is no doubt that they will float in water; but the arteries are not dilated by this artificial inflation, nor the actual weight of these organs actually augmented, which are the consequences of respiration. It must also be admitted that the lungs have occasionally sunk in water, although the infant has lived and respired for several hours after its birth. Many of the most

distinguished obstetricians have confirmed this fact from their own experience; and Schenk, relates the case of a child who lived four days, and cried several times, and yet, after death the lungs sunk in water: a circumstance which has been referred to disease of the lungs, of a tuberculous kind, or a congestion of blood preventing the whole lung from being inflated.

Upon the whole, it appears that the only valid objection to the hydrostatic test, is the possibility that the lungs may have been artificially inflated with air blown into them; and this, as I have already stated, can be detected by the absence of that sanguineous dilatation of the lungs, which is the consequence of real respiration. The pulmonary arteries, before respiration has taken place, are in a collapsed state, and dilate after it is established, their branches becoming full of blood, and adding an additional weight to the organ; but no such circumstance follows artificial insufflation.

Having given you a description of the hydrostatic test, its advantages, as affording the means of ascertaining whether a child have been born alive, which has been found dead, and is suspected to have been murdered, and having pointed out to you the objections which have been raised to this test I have now to bring before you the other tests connected with the state of the lungs, that have been suggested as well calculated to throw light upon cases of infanticide.

Ploucquet having remarked the difference in the state of the pulmonary artery, in children who are still-born and those who have respired, justly conceived that a considerable diversity must exist between the relative weight of the lungs to that of the body of the infant in these cases; and therefore, in 1782, he proposed this as a test of a child having respired, or been born dead. His experiments were made on three children only; but from these, he concluded that the relative weight of the lungs in a still-born child, is as one to 67 or 70; in a child that has breathed, as 1 to 35, or exactly double the weight. The simplicity and apparent accuracy of Ploucquet's test attracted great notice; and many were so sanguine as to suppose that the precise weight of the lungs in the foetus before and after respiration had taken place, might be determined, so that it would be necessary merely to weigh the lungs, in order to pronounce that respiration had or had not taken place. The general principle upon which this test is founded is undoubtedly correct; before respiration has taken place, very little blood passes through the lungs; but after this function has commenced, and the whole mass of blood passes through the lungs, it must be perfectly obvious that their weight must be augmented. Correct as the general principle appears to be, it is nevertheless true that it admits of many exceptions; and subsequent investigations

by Schmitt at Vienna, M. Chaussier in France, and Hartman in Germany, threw some obstacles in the way of Ploucquet's test being adopted, except as a proof to verify conclusions already drawn from the hydrostatic test. Schmitt found that the mean relative weight of the lungs in still-born children is as 1 to 52; Chaussier as 1 to 49; and Hartman as 1 to 59; Schmitt that the mean relative weight in children who had breathed was 1 to 42; Chaussier as 1 to 39; and Hartman as 1 to 48. Still it was apparent that the relative weight of the lungs in a child that had respired was considerably greater than in a still-born foetus; and although this had been overstated by Ploucquet, yet the test was a certain one. Other objections, however, were raised, of which it is necessary that you should be aware. Thus, a barrister instructed upon this subject might inquire whether there is a constant relation between the weight of the body and that of the lungs; or, whether the smallness of the cavity of the thorax may not occasionally repress the natural growth of the lungs. There is, undoubtedly, much point in these objections; but it may be justly stated that exceptions of this kind do not militate against a general rule; and that, in every instance, some difference must exist, although not to the extent pointed out in well formed children.

Another objection had been raised, on the supposition that a congestion of blood might occur in the foetal lungs, which would increase their weight; and, if they were also artificially inflated, they would swim; and thence, there would be no means of distinguishing between them and the lungs of a foetus which had respired. Ploucquet himself replied to this objection; and justly remarked that no congestion of this kind can possibly occur whilst the foramen ovale and ductus arteriosus remain pervious: thence that it could not exist in the foetus. It is indeed difficult to conceive how such a congestion could occur, whilst the foramen ovale and ductus arteriosus remain pervious. The most probable opinion is, that the blood flowing from the mother to the foetus is divided into two equal parts, in order to pass through these inlets to the cavities of the heart; and, if this be correct, how can congestion ever occur in the foetal lungs? With regard to the artificial inflation of the lungs of a still-born child, it is true that lungs so inflated will swim: but it is equally true, that no inflation, after the death of a child, can fill the ramifications of the pulmonary vessels with blood; and thence, although the lungs may swim, yet they will be found to weigh less than the lungs of a child of the same weight who has respired.

In a case, which is mentioned by Roederer, a foetus remained eight hours in the vagina, owing to the constriction of the os uteri: it moved slightly after birth and then died.

The aorta and heart were found distended with blood; the pleura was red and highly congested, whilst the vessels of the brain and those of the abdomen were nearly empty, owing to the great determination to the chest; yet, in this case, the pulmonary artery is presumed to have remained in its usual state, as no mention is made of it; which would not have been the case had it been otherwise, under the examination of so accurate an observer. Other cases confirming this observation might be adduced; it is therefore probable that the pulmonary arteries, although they may suffer a slight dilatation, when the other thoracic vessels are gorged with blood, yet, they are never so much dilated as to increase the weight of the lungs in a ratio equal to that produced by the act of respiration.

To ascertain the effect of putrefaction in falsifying the test of Ploucquet's, Dr. Beck made several trials in cases both in which no putrefaction had taken place, and in some in which it had occurred. In two cases, in which respiration had evidently taken place, he found the relative weight of the lungs as 1 to 35½, and 1 to 37½, approximating very closely to Ploucquet's observations: in three cases, in which the putrefaction of the body was advanced, although the lungs were sound, Dr. Beck found the proportions as 1 to 46½; 1 to 29; and 1 to 39 5-7ths, demonstrating that the putrefaction of the body has a considerable influence in modifying the relative weight of the lungs, and consequently in rendering Ploucquet's test fallacious: and in employing it to verify conclusions drawn from the hydrostatic test, it is necessary to inquire accurately into the state of the body. If putrefaction have taken place before the body be examined, no confidence can be placed on Ploucquet's test, the *docimasia pulmonaris*, as it is termed. In ordinary cases it may be resorted to as one of the various tests, on the general accordance of which our decision is to be founded; it is of little value as an isolated test, but of considerable value when confirmative of the results of other tests.

The descent of the diaphragm has also been regarded as demonstrating the previous existence of respiration. This is true, and to one accustomed to the examination of the bodies of children it must be very obvious and may aid greatly in confirming the results of the other tests; but as it is not so obvious as to be easily recognized by one unaccustomed to dissection, it can only be regarded as a secondary test. One more likely to prove useful is grounded upon the relative size of the liver before and after respiration has taken place. In the foetus before birth, the liver fills the whole of the left hypochondrium, and the greatest part of the umbilical region; but when respiration occurs, the size of the liver is greatly diminished. Now, it is easy to account for this change, since it is evident that if the lungs enlarge by respiration, and the diaphragm descend, the pressure upon the liver must be sufficient to diminish

its capacity and press out much of the mild, viscid bile which fills its ducts before birth. Before birth, also, the liver receives a large supply of blood, but as soon as the respiratory circulation is established, the change necessarily diminishes the size of the liver, a smaller quantity of blood being sent through it; and this, added to the pressure from the permanent dilatation of the lungs, and the descent of the diaphragm, certainly affords a test on which some reliance may be placed, in conjunction with other tests; but if taken alone it is at best an uncertain diagnostic sign. Dr. Beck has proposed to weigh the liver, and, by a comparison of its weight with that of a child who had respired, some support might be afforded by this means to the *docimasic test*. Thus, if the lungs were found of the proper weight, and the liver diminished in weight, there could be no doubt that the child had respired: but if the liver was still as heavy as in the still-born fœtus, although the lungs were inflated, and floated on water, there would be then, according to Dr. Beck, reason for suspecting the inflation had been artificially produced. But Orfila, from subsequent experiments, has ascertained that no confidence can be reposed on the relative weight of the liver, as he found it, in some still-born children, to weigh considerably less than in children who had fully respired.

It has been stated, that the empty or full state of the urinary bladder, and the dis-

charge of meconium, are, also circumstances which indicate the vitality of the fœtus, at birth, or its having been still-born: but both these conditions are of a doubtful character. In many instances, the bladder of urine has been found empty, in a child who has never respired: and with respect to the discharge of meconium, we have not only the authority of Dr. Denman, that it occasionally happens before birth, but, in a fœtus of only six and a half months, gestation, which I exhibited to the class last session, the meconium was already discharged, although the fœtus was extracted from the uterus of the dead mother.

Upon the whole, in taking a retrospect of the various proofs by which it may be known whether a child has breathed, and consequently lived after birth, it is clear that a judicious practitioner will not rely upon any single test, but form his opinion on the combination of the most important tests, as these are supported by one another. Those of the descent of the diaphragm, and the size of the liver are first to be observed and carefully noticed; and afterwards, if the state of the lungs, the floating or sinking in water, and the dilatation or the collapse of the pulmonary artery correspond with these appearances, we can have little hesitation in pronouncing a decided opinion, either that the child has respired, or that it has been still-born.

LECTURES ON THE INSTITUTIONS OF MEDICINE,

DELIVERED BY JOHN FLETCHER, M.D., F.R.C.S.E., AT THE ARGYLE SQUARE SCHOOL OF
MEDICINE, EDINBURGH; SESSION 1834-35.

LECTURE VIII.

Continuation of the Tissues.

THE *Mucous Membranes* again constitute, as it were, the internal skin of the body, lining every canal which opens directly or indirectly upon the surface. One department of these Membranes, called the *Gastro-pulmonary*, enters, in man, by the nostrils and mouth, extends from the former to the various sinuses and cells communicating with them, and, by the nasal ducts, over the anterior part of the eye-balls, and thence into the substance of the Lacrymal Glands; and from the latter, first into the substance of the three pairs of Salivary Glands, and into the tympana of the ears, and afterwards, on the one hand, by the air-passages into the substance of the lungs, and on the other, by the gullet through the stomach and small intestines—whence it passes, partly into the gall-bladder, and partly into the substance of the liver and pancreas—and lastly, through the large intestines, to terminate at the anus. Another division of these Membranes, called the *Genito-urinary*, enters, in both sexes, by the urethra, whence it passes to line the urinary bladder and ureters, terminating at length in the substance of the kidneys; and as, in the female, a portion of this membrane is continued from the pudendum, up the vagina, to line the uterus and Fallopian tubes; so, in the male, a portion of it proceeds from the urethra, through the prostate gland, partly into the vesiculæ seminales, and partly along the vasa deferentia, into the substance of the testicle. There is likewise, in both sexes, a third comparatively inconsiderable department of this membrane, called the *Mammary*, which, entering by the

ducts of each nipple, extends into the substance of the *mammæ* or *mammillæ* (a). Of course, in all tribes of animals, except mammals, the gastro-pulmonary is commonly the only mucous membrane; since the genito-urinary is either wanting, or falls in general into the former by means of a cloaca, and the mammary does not exist. The collective area of the mucous tissue is probably greater than that of any other partially distributed tissue, or perhaps of all the other partially distributed tissues, in the body; as will be readily admitted when it is considered that—to say nothing of the numerous plaits into which it is in most places puckered—the extent of the internal surface of the lungs alone, which constitutes a fraction only of but one department of these membranes, has been estimated to exceed that of the external surface of the body, from thirty to one hundred times (b), and that the ducts of each of the several proper conglomerate glands, lacrymal and salivary glands, liver, pancreas, kidneys, testicles, *mammæ*—all which consist essentially of mucous tubes—may be drawn out, it is said, many thousand feet (c). To this tissue the teeth, which are, in fact, when they first show themselves in the animal creation, little more than ossified or cornified papillæ, and only very gradually approach the jaws, into which they at length insinuate themselves—appear to bear nearly the same relation, as to the Dermoid Tissue, the *Corpus Mucosum*, with the hairs and nails, and indeed in some animals, as the turtle, (*testudo*, 33), they constitute merely two rough horny plates; in others, as the whale (*balæna*, 42), a series of horny bristles, called whale-bone; while in others, lastly, as the crocodile, (*crocodilus*, 35), they are almost undistinguishable, as well as the tusks of many mammals, either in structure or form, from true horns. The Epithelium, in the meantime, with which the mucous membranes are in many places invested, seems to be strictly analagous, in like manner, to the cuticle or epidermis (d). With respect to the *Serous Membranes*, they occur each in the form of an isolated shut sac; one only, and that in the female alone—namely, the peritoneum, at the two points where the Fallopian tubes terminate upon it—being indirectly open in man, and are interposed between containing and contained parts, whenever a sliding motion is to be carried on. Of such sacs are constituted the right and left pleuræ, the pericardium, the peritoneum, the two tunicae vaginales, the arachnoid coat of the spinal cord and brain, the sinovial membranes, corresponding in number to the moveable joints of the body, and the several bursæ mucosæ, as they are called, whether about the joints, or under the integuments, the whole number

(a) It is denied by some authors that the continuity of the Mucous membranes is so unbroken as it has been represented by Bonn and his followers; Gordon and Ribes, for example, questioning whether any such membrane be continued over the cornea; and Chaussier, Ribes, and Madame Boivin, whether the uterus have any such lining. The opinion of Bonn is, however, much more generally adopted. At the same time, it is proper to keep constantly in mind, that the mucous tissue, in its several ramifications, is similar only—not the same; and that the general axiom of Milligan, that “no reasoning from similarity of tissue is ever correct, except when that similarity extends to vital and functionary properties,” is here particularly applicable.

(b) The former was the estimate of the second Dr. Monro, the latter more lately that of Lieberkuhn.

(c) Thus by Monro, the ducts of the testicle are said to be five thousand feet long, while by Ferrein, those of the kidney are represented as not less than sixty thousand feet in length. We have only to multiply the most moderate of such estimates, for a gland of any given size, by the collective size of all the conglomerate glands of the body, to be satisfied that the surface of the mucous tissue must be stupendous; and that, whether the view of some pathologists, who habitually refer all diseases to these mem-

branes, be true or false, it is certainly not, as has been sometimes represented, a circumscribed one.

(d) This analogy, and the essential differences between teeth and bones—with which they had always previously been confounded—were pointed out first by Coiter, and have been successively insisted upon since by Bonn, Walther, Lavagna, Serres, Geoffroy St. Hilaire, Mayer, Heusinger, and many others. It is sufficient to notice here, as distinguishing the teeth of man from proper bones, their mode of formation, their renewal once and sometimes twice, their heterogeneous structure, their great density, their want of periosteum, and their total immunity from the general diseases of bones, such as Rachitis and Mollities ossium. The reputed caries of teeth is no argument for their organic structure; since false teeth not unfrequently undergo a similar change, which, in fact, is rather a kind of chemical decomposition than ulceration. It is a singular fact, moreover, and one that serves to strengthen in some measure this analogy between the teeth and hairs, that in most of the cases in which the former have been deposited in unnatural situations, as the stomach, urinary bladder, kidneys, ovaries, and testicles, a mass of hair has been found to accompany, and often to envelope them.

of which is between two and three hundred. The collective area of this tissue appears to be considerably greater than that of the dermoid, but in a much greater degree, perhaps, it falls short of that of the mucons (*a*). Lastly, the *Fibrous Membranes* do not line either open canals, like the mucous, nor shut cavities, like the serous; but, on the contrary, are connected, on both surfaces, by cellular tissues, to the contiguous organs. They constitute, in man, the inner covering—that below the serous, when this is present—of all the solid viscera, lungs, liver, pancreas, ovaries, testicles, and so forth; they form the outer coat of all the air-passages and ducts of glands, as well as of all arteries, veins, and lymphiferous and chyliferous vessels; it is of these that all the membranes of the foetus are composed; they constitute all the coats of the eyes, with the exception of the conjunctiva, iris, and retina, and the membrane of the labyrinths of the ears (*b*); and it is of them finally, that the dura mater, the pia mater, and neurilema of the several nerves, the periosteum, external and internal, the perichondrium, the ligaments, the tendons, the fasciæ, and the aponeuroses all over the body are composed. The extent of the area of the fibrous membranes, insensibly sliding as they do into the common cellular tissue of the body, cannot be estimated with any thing like precision, but it is certainly very considerable.

The *Vascular Tissue* is not met with in quite the lowest tribes of either plants or animals, the substance of the bodies of which is in general a uniform gelatinous mass; and even in those in which a motion of fluid is first perceptible, it is rather through tubular excavations in this substance, than through a proper vascular tissue, that this takes place. In the higher orders of plants, however, a regular vascular tissue presents itself, but, formed as it is, like the membranous tissues, exclusively from the cellular, it is of nearly the same character in whatever description of vessels it is found. In most of the higher tribes of animals, on the contrary, it is distinctly divisible into the three varieties of arterial, venous, and lymphiferous or chyliferous, to which may be added the parenchymatous or the erectile (*c*). Of the three former, each consists of two distinct layers, which constitute the middle and internal coats of the vessel; its external coat, when it exists, being always formed, as has been just observed, of fibrous membrane; so that, though an artery, a vein, and a lymphiferous or chyliferous vessel is correctly described as consisting in general of three coats, the proper arterial tissue, venous tissue, and lymphiferous or chyliferous tissue, comprises only two.

(*a*) It is proper to observe, that by some modern physiologists—Rudolphi among the rest—the serous tissue is described as unorganized, like the Epidermis or Epithelium, and whatever vitality it appears to possess, is attributed to the parts which it immediately invests, and which, from its tenuity, have been identified with it. If this doctrine become established, we must of course cease, as indeed many of the continental pathologists have already done, to speak of these membranes as the immediate seat of disease.

(*b*) It is not unusual to call the Chorion and Amnion, the Hyaloid membrane, and the membrane lining the labyrinths of the ears serous, rather than fibrous membranes, probably for no better reason than because they contain serum, which, by the way, serous membranes in a state of health never do; while the dura mater, a truly fibrous membrane, and the Pericardium, a truly serous one, are each, in general, called sero-fibrous, the former from its being invested by the Arachnoid, and the latter from its being covered by a fibrous expansion interposed between its rough surface and the conti-

guous parts of the Pleuræ. It is to confound all distinctions, after having established them, so to denominate the parts in question.

(*c*) The arteries and veins were among the *ὁμοιομερῆ* of Galen. The chyliferous vessels were long confounded, as by Erasistratus and Galen, with arteries, *αρτηριαὶ γάλαχτος πληρεῖς*—and the lymphiferous, as by their reputed discoverer, T. Bartholin, (1653) with veins—*venæ aquosæ*; but their pretensions to be regarded as formed of a distinct tissue, were at length established by the Hunters, (1762), Cruikshank, Hewson, and Mascagni. The Parenchymatous, or Capillary tissue—a very different thing from the *παρεγχυμα* or sponge of Erasistratus, as well as from the *Parenchyma*, or fancied folliculi, cryptæ, loculi, cotylæ, utriculi, &c., of Malpighi—was regarded as a separate tissue, first by Bichât; and the Erectile lastly—for a long time mistaken for cells in which arteries in some parts of the body were represented as terminating, was constituted a proper tissue, first by Dupuytren, Richerand, and Bèclard.

The following, then, are the principal characteristics—

	<i>Of an Artery.</i>	<i>Of a Vein.</i>	<i>Of a Lymphiferous or Chyliferous Vessel.</i>
The middle coat.	Composed of dun-coloured, opaque, and somewhat spongy, but tough and very elastic fibres, a little flattened, and placed like rings round the bore of the vessel (a).	Composed of flesh-coloured, semi-transparent, very dense, but almost inelastic fibres, nearly cylindrical, and running longitudinally with respect to the vessel.	Not easily separated, but similar, at least in its thickness, relatively to the bore of the vessel, to that of an artery.
The internal coat.	Transparent, dense, elastic, and without fibres or folds (b).	Semi-transparent, spongy, inelastic, slightly fibrous, and often laid in folds, constituting valves.	Not easily separated, but similar, at least in the structure of its valves, to that of a vein.

The Arterial and Lymphiferous or Chyliferous Tissues become gradually more rigid and unyielding as age advances, and are naturally more so in males than in females, while, on the other hand, the Venous Tissue becomes gradually less so in the progress of life, and is at all times less so in males than in females, so that the proportion of arterial blood, lymph, and chyle, is greatest in children and females, and that of venous blood in old persons and males. The proper Arterial System may be said to begin in man at the radicles of the Pulmonary Veins, to extend through the left heart, and to terminate at the extremities of the arteries of the system of the aorta; the proper venous system to begin at the radicles of the veins of the system of the Venæ Cavæ, to extend through the right heart, and to terminate at the extremities of the pulmonary arteries (c), and the Lymphiferous or Chyliferous System lastly to begin, like the Venous, at their radicles in the parenchyma, and to terminate by two mouths—one on each side—in the system of the upper Venæ Cavæ near the point where it reaches the right heart. The collective capacity of the proper arterial system is computed to be equal, in an adult human being, to about one quarter of that of the Venous, and one half of that of the Lymphiferous or Chyliferous; so that, estimating the quantity of the blood in the body, at any given time,

(a) This is the coat of an artery, concerning which so long and tiresome a controversy has been maintained, some physiologists confidently asserting, while others as confidently deny, its muscularity. The arguments on either side hinge more on the vital than on the physical evidences of this property, and will fall therefore to be considered more at length in future. In the meantime, however, it may be observed that every physical evidence seems to be against the presumption of their muscularity; the muscular tissue being in general red, yielding, inelastic, and composed of cylindrical fibres, whereas the coat in question is dun-coloured, tough, very elastic, and composed of fibres more or less flattened. By some physiologists it is represented as a variety of the tissue, described for the first time in 1822, by Hauff, under the name of *Tela Elastica* or *Flava*—the *Tissue élastique* or *jaune* of the French zoologists—other examples of which occur in the *ligamentum nuchæ*, the *ligamentum flavum*, the immediate envelope of the spleen and other erectile organs, and elsewhere; but there appears hitherto to be no good reason for regarding it otherwise than entirely *sui generis*.

(b) This coat of an artery is often, but very incorrectly, called its serous coat, and it is really amusing to hear persons who admit that the external coat of an artery is

fibrous, and describe its middle coat as muscular, and its internal coat as serous, gravely at the same time talking of an arterial tissue. The internal coat of an artery is allied, not only in its physical characters, but in its liability to certain diseases, to a serous membrane, as the inner coat of a vein is to a mucous membrane; but they are merely allied to, not identical with, these structures.

(c) The former is the *Système à Sang rouge*, the latter the *Système à Sang noir* of Bichat. Before the time of Harvey the pulmonary veins were always called arteries—the *arteriæ venosæ*—and the pulmonary arteries veins—the *venæ arteriosæ*—and the change of names, which he introduced, was certainly any thing but judicious. The properties of its contents, the nature of its tissue, and the character of its diseases, are surely better foundations for the name of a vessel than the accidental circumstance of the blood flowing through it either from branches to trunks, or from trunks to branches; and in all these respects the so called pulmonary veins are strictly arteries, and the so called pulmonary arteries, veins. If the opposite principle be adopted, what, it may be asked, is the *vena portæ*? It is a vein at one extremity, and an artery at the other.

as thirty pounds, the Arterial System will contain six, and the Venous System twenty-four—while there will be, at the same time, about twelve pounds of lymph and chyle in the Lymphiferous or Chyliferous Systems. The whole extent of these Tissues, then, exclusively of the Parenchymatous and Erectile, must be very great. The *Parenchymatous* or *Capillary Tissue* comprises the net-work of minute vessels in which the proper arteries, or in the lungs, veins terminate on the one hand, and from which the proper veins and lymphiferous or chyliferous vessels, or in the lungs, arteries begin on the other. It is known rather by its actions than by its structure, to be distinct from the proper tissue of any one of these systems of vessels, since the vessels of which it consists are too minute to present any distinct physical characters; its actions, however, are such as pretty obviously indicate in these vessels a co-existent muscular coat (a), although, as it is impossible to believe that they consist exclusively of this, the admission of a proper Parenchymatous Tissue was not improper. The Parenchymatous or Capillary Tissue—as the seat of all the molecular actions of the body—is of course universally distributed, and indeed, so copiously interwoven probably with all the organized Tissues, that it constitutes a great part of their bulk and weight. The *Erectile Tissue*, lastly, is little more than dilatable parenchyma—that is to say, a net-work of extreme arteries, and incipient veins and lymphiferous vessels—chiefly, however, veins—which are susceptible of sudden dilatation from certain causes, but, on these causes ceasing to operate, immediately return to their original size (b). Of this Tissue are said to be composed all the papillæ of the Dermoid and Mucous Membranes, the thyroid and thymus glands, the spleen and supra-renal capsules, the corpus spongiosum urethræ, the corpora cavernosa clitoridis, the fimbriated extremities of the Fallopian tubes and the papillæ of the mammæ, and the corpora cavernosa penis; its extent, therefore, is pretty considerable. It is not improbable that the several conglobate, or lymphiferous and chyliferous glands consist also of a kind of Erectile Tissue; the principal vessels of which, however, are not, as in the proper Erectile Tissue, extreme arteries and dilatable incipient veins, but extreme lymphiferous or chyliferous vessels meeting dilatable vessels of the same description; and that these glands are thus a kind of diverticula of lymph and chyle, as the organs before enumerated are of blood.

The *Osseous Tissue* (c)—for of the *Ligneous* and *Medullary Tissues* of Plants no particular notice needs at present be taken—it is hardly necessary to observe, is almost proper to the vertebrate tribes of animals, and in some, even of these, as the cartilaginous fishes, the cartilaginous tissue supplies its place. It is in man of a blue-grey colour, opaque and inflexible, consisting of hard plates, which are composed of fibres united together by cellular tissue, the latter, as it approaches the surface of the bone, becoming gradually condensed into its external periosteum, and forming, in like manner, its internal periosteum, if the bone be cancellated or hollow. It constitutes the whole of the proper skeleton, the number of bones of which is, in the adult, about two hundred and fifteen, exclusive of the ossa triquetra and sesamoidea, and all, except the hyoid bone, are more or less directly

(a) The peculiar property which these vessels manifest—the insensible contractility of Bichat—has been distinguished, apparently very superfluously, from that displayed, during their sensible contractions by the more obvious muscles, by Stahl and his followers, Whytt, Cullen, and others, by the name of tonicity, and by Chaussier and Blumenbach by that of contractility, as contrasted by the former with myotility, and by the latter with irritability. If this property, however, be not—as it certainly is not—elasticity, it must be that which is characteristic of muscular fibre, for we have no evidences of the existence, in the living body, of any third source of motion, the muscularity of the parenchyma, if admitted, being quite adequate to explain all the alleged contractions of the cellular, the dermoid, and other tissues, not *per se* possessed of muscular fibres—nay, even perhaps of the middle coat of the larger arteries themselves. It is true the circumstances under which these contractions occur are often very different from those which call the sensible muscles into action; but this may be easily

explained, without the admission of any difference of tissue. The heart, the stomach, and the urinary bladder, all owe their property of contracting to their muscular fibres; but these fibres are called into action, in the different instances, by stimuli of a very different character. This subject, however, will be considered more fully in future.

(b) Of all the five formerly reputed terminations of arteries, then—in veins, in lymphiferous vessels, in the follicles of glands, in the cells of erectile organs, and in exhalents—the two first only can be retained: the folliculi, &c. of Malpighi having been proved by Ruysch to be nothing more than pensils of radiating arteries, coalescing with corresponding pensils of veins, &c.; the cells of Ruysch having been proved by Duvernay, Cuvier, Tiedemann, Ribes, Morreschi, Dupuytren, and others, to be nothing more than dilated parenchyma; and the exhalents of Leeuwenhock having never been seen by any body who did not require them in order to support an hypothesis.

(c) Both bones and cartilages were among the *σποιομενη* of the older authors.

connected together: the average weight of the entire skeleton, including, of course, a great proportion of water, is thirty pounds, or about one-fifth of that of the body.

The *Cartilaginous Tissue*, again—the last of those derived from the Cellular—is of an opaline colour, semi-transparent, extremely pliable and elastic, and of a homogeneous structure, without any appearance of fibres in its undecomposed state: this tissue is sometimes inextricably interwoven with the proper Fibrous, when it constitutes what is called the *Fibro-cartilaginous Tissue*. Of one or other of these are composed, 1, the obducent cartilages, or those which directly cover the extremities of bones at the moveable joints; 2, the inter-articular, or those which are sometimes indirectly interposed between such bones in these situations; 3, the ligamentous, or those which perform the office of ligaments, as at all the synchondrosial joints; and finally, the vicarious, or those which stand in the place of bone, as at the sternal ends of the ribs, in the larynx, trachea, and bronchi, and about the nostrils, eye-lids, and external ears, giving to these organs at once security and pliability. The distribution of this tissue is not however very extensive.

Such, then, is the first Elementary Tissue—the Cellular—with its compounds, the membranous, vascular, osseous, and cartilaginous: of the two other Elementary Tissues—the Nervous and Muscular—each presents two varieties, but neither ministers to the formation of any compounds.

A proper *Nervous Tissue* is certainly not met with in the lower tribes of plants, and the existence of any such tissue, even in the highest, is very problematical, although by some authors the Medullary Tissue (a), and by others the modification of the Vascular Tissue constituting the spiral vessels (b), has been so reputed. By other physiologists some small globules, similar in appearance to those of which the ultimate fibrils of the proper Nervous Tissue of animals have been supposed to consist, and answering in a similar way to chemical re-agents, have been detected about the base of the petiole of the humble plant (c) (*Mimosa*), and regarded as its Nervous system; but if these constitute a proper Nervous Tissue, it is certainly in a very rudimental state. In quite the lowest races of animals also, it is equally wanting; no appearance of it having been hitherto met with in any of the zoophytes, including the Sea-blubber (*Medusa* 4), Sea-hedge-hog (*Echinus* 5), and some others, the degree of organism of which is certainly such as would have led us to expect it (d). In all the higher orders of animals, however, it is uniformly found, and is divisible in quite the highest into two varieties—the ganglionic, or that constituting the system of the great sympathetic nerve, and the cerebro-spinal, or that constituting the spinal cord and brain, and the nerves immediately connected with them (e): the two, however, become more or less amalgamated together as they proceed each from their central parts. Both consist partly of a grey and partly of a white substance, opaque, pulpy, and inelastic, the grey matter being always homogeneous in its structure; the white sometimes homogeneous, at others fibrous, and both supported by a fibrous membrane, called Neurilema, which in the homogeneous nervous substance is flexiform in its structure, and in the fibrous tubular. Between the two varieties of the Nervous Tissue, the principal distinctions are, that

In the *Ganglionic Nervous Tissue*,
The grey and white substances are everywhere—as well in the minutest nervous filament as in the largest ganglion—inextricably interwoven together;

The white matter is always homogeneous; and

There is found, upon analysis, very little oleaginous matter, but some fibrin.

The form of the primitive nervous fibre is said to be cylindrical, and its size about twelve

In the *Cerebro-Spinal Nervous Tissue*,
The grey and white substance are always separated by a decided line of demarcation, and the former is found only in the central parts of the system;

The white matter is in some Nerves—as those belonging to the Respiratory and Motiferous systems—fibrous; and

There is found, upon analysis, much oleaginous matter, but no fibrin.

(a) Linnæus, Haller, Brâchet.

(b) Oken.

(c) Dutrochet.

(d) Very recently, Erhrenberg of Berlin, among other discoveries made with the microscope, has announced that of the existence of a nervous system in all the Infusoria; further observations, however, are required to establish this as a fact. (See Archives Generales for December, 1834.)

(e) The nerves were the last of the above-named *δυσιομεγν* of Galen, who was further the first to restrict the word *Νῆρος* to the sense which it now bears, instead of extending it, as before his time was the custom, to

signify also a tendon or ligament, or even a blood vessel or a muscle. The separate existence of the Ganglionic Nervous System, although known to Galen, was not generally recognized till the time of Willis; and it was not till that of Bichât that the tissue of which it consists was distinguished from that of the Cerebro-spinal System, by the name of Nervous Tissue of Organic Life, as opposed to the Nervous Tissue of animal life. The above terms, however, as founded on physical, and not vital distinctions, and as not implying any hypothesis, have been considered preferable.

times greater than that of the primitive muscular fibre, and it is from the circumstance of the tubular neurilema, which immediately invests this, having been sometimes injected with mercury, that the Nerves have been by some authors represented as hollow (a): it is commonly described as somewhat tortuous in its course, to compensate for its want of elasticity. The collective compass of the larger portions of the Ganglionic Nervous Tissue is comparatively inconsiderable, but that of the Cerebro-spinal is much greater, the spinal cord of an adult man weighing about an ounce and a half, the brain between forty and fifty ounces, and the Nerves immediately proceeding from them being also of considerable size. But it is perhaps chiefly of the minuter ramifications of these two systems that the bulk of the Nervous Tissue is composed, universally as these are distributed, and copiously as, like the Parenchymatous Tissue, they are interwoven probably with every organized tissue of the body, so that they constitute a great part of the volume and weight of each.

(a) M. Bogros (Rév. Méd., 1825), corrected by M. Amussat (Rév. Méd., 1827).

LECTURES

ON THE

PHYSICAL EDUCATION AND DISEASES OF INFANTS,

FROM BIRTH TO PUBERTY,

BY DR. RYAN,

Delivered at the Medical School, Westminster Dispensary, Gerrard Street, Soho; Session 1834-35.

LECTURE XXVI.

Adhesions of different Organs.

GENTLEMEN—*Adhesion of the Tongue to the Gums.*—Infants have been born with the tongue adherent to the gums, or vicinal parts, by means of ligamentous or membranous cords. The effect of this vice of conformation would be an inability to protrude or retract the tongue, or to form that furrow in it which is essential for suction. If the infant survived, there would be either complete dumbness, or very imperfect speech.

Treatment.—The adhesions should be incised with a pair of scissors. In effecting this object, the nose should be seized between the thumb and index finger, which would oblige the infant to respire through the mouth, and then the scissors could be introduced. The hæmorrhage is generally trivial in such cases; but, if obstinate, the actual cautery should be applied. The cautery should be the last remedy, and only resorted to after pressure, a saturated solution of alum, and other styptics had failed. Such cases are fortunately rare.

Tongue-tie.—When the frænum of the tongue is too short, or when it extends towards the apex of the tongue, the infant cannot suck, or speak at the usual age. This disease is readily detected by introducing a finger into the mouth under the tongue. The evil result of this malformation would be the death of the infant from an inability to suck; and, consequently, from a want of nourishment. An operation is necessary as soon as the disease is discovered; and it is much easier performed on a new born infant, than on one of six or twelve months

old. If the infant can suck well, the operation may be deferred for a month or two; but when speech is impeded, and when reason replaces instinct, the operation, on account of the great chance of docility, will be performed with less difficulty. The faculty of speech usually commences about the sixteenth or eighteenth month, so that an operation should be performed before this age. The operation is simple. The infant's head and arms are to be held, when the practitioner introduces the index finger of the left hand into the mouth, depresses the lower jaw, carries the point of his finger to the root of the tongue, and by the side of the frænum. He then introduces a blunt pointed part of the scissors, and divides the frænum in the middle. He is to avoid cutting too near the root of the tongue, lest he wound the ranine arteries or veins, and cause fatal hæmorrhage, or free the tongue so much as to give rise to retroversion of it, which might cause suffocation—an accident which occurred, according to Petit and Levret. Some advise a sound with a slit in its extremity, or a piece of card slit so as to pass on the frænum; but experience has convinced me that neither is necessary in the majority of cases.

Should the vessels be wounded, a troublesome hæmorrhage will occur, and this will be increased whenever the infant makes suction. Petit proposed pressure on the tongue, which was to be retained by a bandage round the lower jaw to suppress this hæmorrhage, but every one must see the impracticability of such a contrivance. In some cases a saturated solution of alum (about a drachm to an ounce of water will arrest it); should this fail, the actual cautery must be applied. Cases are said to have occurred which required the carotid artery to be tied. Hæmorrhage scarcely ever happens when the operation is performed a few days or weeks after the birth of the infant; and there is most danger of it when the infant is three or four years old, as then it can be kept steady with much greater difficulty during the operation. A practitioner is often requested to cut the frænum when the infant does not suck well; but he will often discover that the cause is a short or

undeveloped nipple, the result of original malformation, or of the injurious custom of tight lacing. In such cases the nipple must be elongated by means of suction made with a breast bottle, or new tobacco pipe, or by a strong infant, or the nurse. When this fails, a wet nurse ought to be provided in all cases, if the parents can afford to procure one. Some infants raise the tongue towards the roof of the mouth, and this prevents them from making suction. In such cases the tongue should be depressed with the handle of a tea spoon, or a spatula, every time the infant is about to be applied to the breast, until it acquires the power and habit of sucking. The tongue may adhere to the vault of the palate, as attested by Lapis, Levret, and Bunel.

In some cases the frœnum may be shorter than natural, but offer no impediment to suction, though it may cause stuttering. The celebrated Demosthenes laboured under this disease. In some instances the division of the frœnum will effect a cure. I have observed this fact in two instances; one was a boy aged nine, and the other a girl aged thirteen years. I divided the frœnum in both, and the power of distinct articulation was speedily developed. I have frequently observed the frœnum of extraordinary thickness and shortness in children whose speech was thick and indistinct. Mr. Warden, of Limehouse, lately consulted me in a case of this kind.

Unions of the Fingers and Toes.—This deformity is occasionally met with; and the union is membranous, somewhat similar to that of birds. Union of the toes is productive of little inconvenience during childhood, but is a serious defect during the adult age, as it may much impede locomotion or walking; but that of the fingers prevents the power of grasping objects.

When the adhesion is firm, it should be separated with a bistoury; but when it is membranous, a pair of scissors will be preferable. After the division of the parts, they should be kept separate by simple dressings and bandages, and re-union prevented.

Union of the Penis and Scrotum.—Petit describes a remarkable case of this deformity. He found in a child of twelve years of age, who died of another disease, that, on inflating the corpora cavernosa, and dissecting the parts with great care, the urethra was very short, ligamentous, inextensible, and without cellular tissue. He extended both extremities of that canal, but on loosening his hold they assumed their natural situations and preserved the original curvature. In fact, the curvature was so great, that had the individual arrived at the adult age, he could not fulfil the end of marriage.

Infants have also been born with the frœnum of the prepuce too short, too thick, or too hard, so as to produce curvature of the glans penis, an impediment to erection, and

to marriage. This disease is of little importance during infancy; and may be remedied in adults by a simple incision. There is scarcely any hæmorrhage, and this can, in general, be readily suppressed by pressure, or cold astringent lotions.

Congenital divisions of Continuity.—It is recorded, but I have not observed such cases, that the bones may be fractured during intra-uterine existence, either by external injuries inflicted on the abdomen of the mother, such as falls, blows, &c., or by a convulsive motion of the muscles of the fœtus, when the bones are diseased. Mollities or fragilitas ossium, the contamination of syphilis or cancer, will often predispose to fracture in the adult, and consequently in the fœtus. The latter cause will explain the existence of fractures supposed to be produced by the imagination of the mother. The cases recorded by Malebranche and others, of infants born with different fractures, and ascribed to the terror of the mother at having witnessed the mutilation of malefactors on the wheel, were satisfactorily explicable by the preceding cause. Women are often frightened in our times, but they seldom bring forth infants with fractures. Infants have been born with ununited fractures of all the long bones (Amand, Chaussier.)

Infants have also been born with consolidated fractures. Fractures may be inflicted by the bones of the pelvis, through which the infant has to pass into the world, or by instrumental or manual operations. The bones of the cranium, lower jaw, clavicle, superior and inferior extremities, the ribs and bones of the pelvis, have been fractured by the preceding causes. Cheselden described fracture of the ribs caused by nurses. Numerous other distinguished obstetricians and surgeons have attested fractures caused by the forceps, lever, or by the operation of version. These fractures are to be treated on ordinary principles.

Wounds of different parts may be inflicted by projecting bones, when the maternal pelvis is deformed, or by artificial delivery. Various obstetric writers attest examples of this kind. (Mauriceau, Delamotte, Saviard, Amand, &c. &c.)

The fœtus in utero has been wounded in homicidal attempts to procure abortion. It has also been wounded after birth, for, the same criminal intent, by acupuncture, or through the nasal fossæ, the orbit, the fontanel, the temple, the ear, the neck, the axillæ, or the region of the heart, the anus, abdomen, vagina, &c. In such cases the traces of blood will alone lead to discovery. Such cases are recorded in the works on forensic medicine. Other parts are divided, as the lip, the palate, the uvula, and the urethra in the male.

Hare-lip.—This term is applied to division of the upper lip, which may be simple, double, or complicated, according as there is one or two slits in the lip, or wher

gum, palatine vault, or uvula is divided, or the divided lip is attached to the gums.

The lip presents a longitudinal, triangular, or irregular cleft, whose edges are round, thick, and covered with a thin roaceous membrane. The cause of this deformity is wholly unknown, and cannot be supposed to depend on the maternal imagination. I have known five cases of ladies who dreaded that their infants would be born with hare-lip, though every one was perfect. Tiedeman attributed this deformity to a certain alteration in the brain, as when it is deprived of some of its median parts; while Oslander and Duges ascribe it, conjecturally, as the effect of some former intra-uterine hydrocephalus. The cause is, however, still unknown, and remains to be determined.

The bad effects of hare-lip are deformity, inability to suck, imperfect nutrition, and defective speech at a future period of life. Moreover, the crying and laughing of the infant very much increase the deformity, and render it hideous.

When the division is prolonged to the palatine vault, the opening permits the ingress of the air into the mouth, according as it is removed by suction, and this prevents the afflux of the milk, or allows it to escape through the nose, and the results are imperfect nutrition, and the decline of the new born infant. It is therefore essential to the preservation of the health of the infant, that relief should be speedily afforded in bad cases.

There is, however, much diversity of opinion as to the proper period for performing an operation to remove this deformity. Rooknuisen, Ledran, Louis, Sabatier, and Duges advised the operation in a few days after birth. Boyer, Dubois, and Capuron consider the fourth or fifth year the most advantageous age, as the lips will be sufficiently firm, the infant more sensible of its deformity, and more docile to support the operation for its removal. Others maintain that the lip is too delicate and tender at birth to retain the needles and sutures, which would cut through it.

If the operation is determined on immediately after birth, it is to be performed by incising the margins of the divided lip with a pair of very sharp scissors, and then passing two or three needles so as to bring the edges in perfect apposition, and secure them by the twisted sutures. The operator must take great care to bring the whole surfaces of the lip in perfect apposition, and especially the lower margins, so as to prevent deformity. Union by the first intention ought to be induced, and this generally takes place. The operation is technically termed *chiloraphy*.

Congenital division of the Palatine arch and Uvula.—This is a very rare occurrence, and was seen only once by the experienced professor, Capuron. The subject was an Ameri-

can gentleman, aged twenty-one years, who was attending his lectures on obstetrics. The professor advised his pupil to consult Baron Roux, who incised the edges with a pair of scissors, united them by means of sutures, which he inserted with a needle fixed in a handle. This operation was successful, and called by its inventor *staphyloraphy*. He has since performed it successfully, and it was lately attempted at the Westminster Hospital in 1834, without success. It can only be performed when the child has reason, and according to some, at the adult age only.

Congenital division of the Parietes of the Thorax, Abdomen, and Genital Organs.—The records of medicine afford examples of absence of the anterior wall of the chest and abdomen, and the viscera floated in the amniotic fluid (*Fried*). The osseous part only was wanting in other cases (*Adelon*), and the heart has been seen covered by the skin only (*Duges*). I have seen two infants whose abdominal viscera were covered by skin alone at birth. Both were born dead. My friend, Mr. Hughes of Holborn, had attended at the birth of one of them, and has it preserved. MM. Capuron and Sedillot, and Borel, record similar cases.

The hypogastric region often presents a red, fungous, painful tumour, which is the bladder, protruding through the abdominal parietes. This is most common in males, and has been termed *exstrophy*. The umbilical cord is inserted near this tumour, the orifices of the ureters are apparent, the pubic bones are separated, the cavernous bodies are distinct, the urethra opens on its superior surface, so that the penis represents a deep groove (*epispadias*). Some cases of distention with danger of rupture of the bladder, are supposed to be the intra-uterine cause of this deformity (*Wrisberg*, *Chaussier*, *Vrolick*). It does not prevent the infant from living, but disqualifies the male for generation.

With regard to the treatment of this deformity, little can be done except preventing the constant discharge of urine, by means of a compress and other contrivances. The genital organs are liable to congenite divisions. The urethra may open on any part of its trajet, from its external orifice to the scrotum, and the disease is named *hypospadias*. When there is an opening on the back of the penis it is termed *epispadias*; and when there is a lateral opening it is called *pleurospadias*.

The first of these is the most common, the others rarely occur.

When the meatus urinarius is obliterated, and an opening supplies its place near the frænum, no operation is necessary, and the individual is capable of performing the act of generation. The infant suffers no inconvenience, as it discharges its urine very freely, and without any annoyance. Some proposed to incise the glans over the site of the natural aperture, then to pass a bougie

or catheter through the obliterated portion of the urethra. This operation is not performed nor sanctioned by modern surgeons. When the aperture is near the root of the penis, the individual will be sterile, and his disease cannot be remedied. Spallanzani impregnated a bitch by injecting the male semen into the vagina; and John Hunter advised a patient who laboured under fistula in perineo, through which the spermatic fluid passed during sexual congress, to collect the fluid and inject it into the vagina. It was said that pregnancy followed; but I do not believe it:—it is barely possible, but extremely improbable. When the scrotum and perinæum are divided, sterility is still more complete; and it is sometimes combined with impotence, on account of the brevity and disfiguration of the penis. Individuals so deformed are supposed to be hermaphrodites, as the cleft situated behind and below the penis bears a rude resemblance to the vulva. M. Duges is of opinion that we may regard this disposition as a presistance of the intermediate embryonary state of the two sexes—so is Dr. Fletcher.

Sabatier mentions a case of the latter malformation, which gave rise to a singular mistake. The infant was supposed to be a female, and was brought up as such, but after some time the penis developed, which at birth was not larger than the clitoris. The scrotum was not apparent, and the testicles had not descended from the abdomen. M. Capuron relates another remarkable case, in which the hypospadias was prolonged to the scrotum; the fissure formed two great lips, each of which contained a testicle, which determined the sex of the infant, and dissipated the illusion. He states that M. Girand saw a case of this kind at the Hotel Dieu, in 1796, which is described by M. Leveille, in his *Nouvelle Doctrine Chirurgicale*. There was a similar case presented at the London Hospitals, in 1834, and many students supposed the individual to be a hermaphrodite. Attempts have been made to cure abnormal apertures of the penis, by incising the edges, inserting a suture, with a view to effect union by the first intention. The operation generally fails. Many of you have witnessed its failure on a late occasion at the Westminster Hospital, and those who have not, will find a full report of the case in my journal. I am not aware that operations have been performed on infants, and I should decline to recommend or perform them, as the deformities are not productive of any inconvenience in early life.

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OBSERVATIONS ON AGUE,

BY LAUNCELOT PAUL, M. D.

(Continued.)

Of Complicated Ague.

By *complicated ague*, I mean ague accompanied with visceral inflammation. The nosolo-

gists will perhaps quarrel with me for calling the disease I am about to describe ague, because it is a form of what is usually denominated remittent fever; but as I am convinced that it differs from ague only, in being combined with local inflammation, I think that the term complicated ague conveys a clearer idea of its nature, and points out more accurately its natural affinities.

The paroxysm of an intermittent has been made, by many writers, the basis of reasoning on fever in general. It has been surmised, that a continued fever is a succession of such paroxysms variously combined, and this notion has been supported by several alleged facts, which I cannot say that my own observation has enabled me to verify. Thus it has been asserted, that ague frequently passes into continued fever; now it is no doubt possible, that any protracted disease, which greatly disturbs the general functions of the system, may induce continued fever; but I must declare that I never saw ague pass, by any thing like a natural transition, into common continued fever—and as I have seen a great many cases of ague, I must conclude that such transition, if it ever occur, is extremely rare, and that ague has no natural tendency to pass into continued fever. It is, however, true, that ague very frequently becomes complicated with local inflammation, and passes into a severe form of *remittent fever*. Again, it has been asserted that continued fever has often, towards its close, a tendency to intermission, and finally resolves itself into ague. I never saw this either. It is true, indeed, that in marshy districts, the state of debility attendant on convalescence from continued fever, renders the patient very liable to ague, and he is frequently seized with it; I conceive it is this fact that has given rise to the notion that continued fever passes into ague—which, as far as I have been able to observe, it has no tendency to do.

The term *remittent fever*, has been somewhat vaguely applied. In most, perhaps in all continued fevers, there are exacerbations and remissions, and these are particularly conspicuous in the fevers of children.

When such alternations are strongly marked, the fever is frequently called *remittent* though it be in fact the same disease with that commonly called *continued fever*. To this the only objection is, that two very distinct diseases are confounded under a common denomination, namely, *continued fever*, in which the exacerbations and remissions are rather more strongly marked than usual, and real *remittent fever*, or, as I call it, *complicated ague*. In continued fever, the exacerbation consists merely in a period of increased heat and excitement, unpreceded by any thing like a cold stage, and the remission consists merely in an abatement of this excitement, not produced by a critical diaphoresis, but

most probably connected with those diurnal changes in the animal economy, of whose nature and laws we are ignorant, though they have a marked influence on the course of diseases. In proper remittent fever—the fever of marshy districts—the exacerbations are much more distinct and violent; they are preceded by a renewal of the cold stage, and are generally resolved by perspiration, the paroxysm being thus terminated, while fever, in a minor degree, is still kept up by the presence of local inflammation. Throughout the course of the disease we can distinctly trace an ague, which is often sufficiently regular in its type, the intermission being filled up with the ordinary symptoms of visceral inflammation. I have never been in the East Indies, but as far as I can judge from description, the marsh remittent of our own country does not differ essentially from that of India, allowance being made for the peculiar influence of a tropical climate on the whole system, and particularly on the liver.

I shall describe the disease as I have seen it; and I may mention that my observations on all the forms of ague have been made chiefly in the marshy parts of Somersetshire. This disease comes on in all respects like a common ague, with rigor and oppression, and very frequently bilious vomiting. During the hot stage symptoms of local inflammation manifest themselves, the seat of the inflammation being various.

It is generally in some of the abdominal viscera, and the stomach is perhaps, on the whole, its most frequent locality, in which case burning pain in the epigastrium, and frequent vomiting, are prominent symptoms—but it is unnecessary to enumerate the well known phenomena of inflammation in the different viscera. The small intestines, liver, and spleen are frequently affected, and inflammation of the kidneys is by no means of unusual occurrence.

The brain is less frequently inflamed than the viscera of the abdomen; when it is so, the phrenitic symptoms are exceedingly violent during the excitement of the hot stage, and the disease, if not checked soon, terminates fatally. Inflammation of the pleura, or parenchyma of the lungs is not very common; in most severe cases of marsh remittent however, the bronchial membrane is more or less affected, and the patient is teased with cough. As the hot stage subsides, perspiration breaks out upon the skin, and the local pain and general distress are much alleviated; but the pulse does not return to its natural standard, and the symptoms of local inflammation, though much abated, still continue. These paroxysms are repeated, sometimes once, and sometimes twice in the twenty-four hours, and in their recurrence we may, in most cases, trace some one of the more ordinary or less common types of ague. One of the most remarkable features in this disease is the great

prostration of strength and spirits, and the tendency to syncope, arguing the presence of some cause which powerfully depresses the nervous energy. The state of the bowels is various; sometimes they are constipated, at others diarrhoea prevails; but in almost all cases the alvine excretions are exceedingly dark coloured and fetid.

I have stated my belief that this disease is ague complicated with various forms of visceral inflammation. My reason for thinking so is, that if the local inflammation be subdued, the disease immediately changes into a common ague, which is as easily arrested by the bark as any other ague. This position will be best illustrated by considering—

The Treatment of Complicated Ague.

As soon as the disease has declared itself, the lancet should be used with promptitude and boldness, and the practitioner should not be deterred from its application by the appearance of debility. The tendency to syncope is often so great that the patient, if bled in a sitting position, will faint before a tea-cupful of blood has been drawn; to obviate this, he should be bled while in a recumbent position, and the blood should not be allowed to flow too rapidly. It is desirable, if possible, to extinguish the inflammation at once; but in this, as in all other fevers, we are not to deal with local inflammation as if it were the sole disease. A large dose of calomel, combined with some other purgative, should be administered shortly after the bleeding, and if the pain be not entirely subdued by the use of the lancet, a blister should be applied; and in a word, we must use vigorously, and without loss of time, those means which are applicable to the case of inflammation as an adjunct of fever. If it should fortunately happen that the inflammation has been entirely subdued by the means used at the onset of the malady, the second paroxysm will be one of simple ague, at the conclusion of which the bark may be safely used, and the disease cut short. More generally, however, some degree of inflammatory action remains, which may be rekindled with considerable violence during the second paroxysm, in which case venesection must again be had recourse to, and this repetition of it will generally be successful. The moment we find that the disease is reduced to a simple ague, or that the patient, in the intervals of the paroxysms, is free from all symptoms of local inflammation, the quinine should be thrown in, at first in a moderate dose, the effects of which should be watched; for if there should still be a lurking tendency to inflammation, the medicine, by its stimulating effects, may rekindle it, and, if persevered in, occasion serious if not fatal mischief. If it be found that the first dose has no bad effect, we may proceed without fear, and repeat the remedy in large and

frequent doses, to prevent the recurrence of the paroxysm ; which is a point of some importance, because the recently inflamed organ is extremely liable to re-assume the same morbid action, which might be set up anew by the excitement of a febrile paroxysm. In those cases in which the ordinary antiphlogistic means fail to subdue the inflammation, the danger of a fatal result is considerable ; but let the practitioner be warned against the premature use of the bark, which will invariably make matters worse than they were before. In such cases I have had recourse to mercury, and generally with good effect ; when the mouth became sore, the inflammation was resolved, and in most instances the ague also was arrested, and convalescence ensued. I never tried the effect of salivation on common ague, not thinking it a justifiable procedure, merely for the sake of experiment, when we already possess a mild and efficacious remedy.

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Reviews.
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An Inquiry into the Nature and Properties of the Blood in Health and Disease. By the late Charles Turner Thackrah. Edited by Thomas G. Wright, M.D. To which is added a Biographical Memoir of Mr. Thackrah. London. 8vo. 1834. pp. 246.

(Continued from p. 324, vol. vii).

4. To the influence of the nerves—the nervous influence being considered as the source of the blood's fluidity, and its loss the cause of coagulation.

"(1.) In the preceding examination of the effects of *rest*, the veins of different animals were insulated, and it was found, that although the loss of motion failed to produce concretion, yet that the blood acquired an increased disposition to this change. In such circumstances, however, the vessels, if not partially dead, were at least so situated as not to allow the free admission of the nervous influence. On the supposition, then, of this process depending on the loss of vitality in the blood-vessels, we might conclude that concretion would have taken place in a few minutes, had the receptacle been wholly devoid of life; but from the vessels possessing a degree of vitality, the blood did not speedily nor freely coagulate. That rest alone cannot give even a disposition to concretion, seems evident from the remarks on that subject.

"(2.) In two instances (XXXIX and XL) the blood was found fluid in the hearts of oxen twenty minutes and half an hour after their slaughter, but coagulated quickly on its removal from these vessels. Vitality, in these cases, must have existed, since the

period between the apparent death of the animals and the examination of the blood was too short to admit of the extinction of the living principle; and the circumstance of fluidity being maintained as long as the blood was kept in its vital receptacles, and coagulation shortly occurring on the exposure of this fluid, strongly supports the doctrine under examination.

"(3.) In the leech which has died soon after suction, the blood is found concreted, but if it be retained in the living reptile, I have found no trace of coagulation at the end of an hour. It is probable, therefore, that the blood's fluidity is maintained by the life of its receptacle.

"(4.) In most of the cases related by Morgagni, in which the blood after death remained fluid, or but partially coagulated, the patient had died suddenly from some affection of the brain or nervous system. In such circumstances, it is known that the contraction of death does not occur, the muscles remain flaccid, and the temperature of the body is long maintained. If these effects be considered as originating from life still lingering in its tenement, we see cause, on the theory adduced, for the blood's tardiness in coagulating.

"(5.) On this subject an observation of Fontana is deserving of regard. He found, that although the coagulation of the blood out of the body was not affected by commixture with poison of a viper, yet that this substance, when injected into the veins of a living rabbit, produced instant coagulation of the circulating fluid, and the speedy death of the animal. The effect here stated could arise, I conceive, only from the shock given to the living principle resident in the heart of the vessels ; and since the preceding remark of Fontana proves the simple mixture of the poison with the blood to have no effect on the coagulating process, we must conclude that the *sudden destruction of the nervous influence induced instantaneous concretion*.

"(6.) I have proved by repeated experiments, that conglutination occurs speedily in proportion to the debility of the system. If debility affect primarily and principally the organs of sensorial power, or (to speak, perhaps, more properly) if these organs first lose their excitability, we remark, as a collateral support to the theory adduced, that in proportion as the nervous influence languishes or dies, the blood assumes a stronger disposition to coagulate.

"The faintness which occasionally ensues on venæsection has a similar and marked effect: this occurrence, if I mistake not, can arise only from the suspension of that supply which the vessels receive from the nervous system, and the consequently increased disposition of the blood to concrete.

"After thus stating the circumstances which afford plausible grounds for the a

mission of the doctrine, I proceed to more decisive evidence.

"Mr. (now Sir) Astley Cooper, to induce me to the examination of a subject, in which, from its intricacy, I despaired of success, kindly favoured me with an account of three experiments which he had made some years ago; but as the statement was merely verbal, I doubt the complete accuracy of my details."—pp. 81—83.

We subjoin a correct account of the experiments of Sir A. Cooper himself, as given in a note to the present edition of the work.

"**Exp. I.** Having carefully excluded the atmosphere from the ureter of the ox, I tied one end and put a cock upon the other. The cock was tied in the jugular vein of a dog, and being then turned, the blood rushed into it. The cock was then shut, and the blood in ten minutes was found coagulated.

"**Exp. II.** The same experiment was repeated upon the jugular vein of the ox, which was by the same means as the ureter had been introduced into the jugular vein of the dog, and the blood coagulated in ten minutes.

"**Exp. III.** Two ligatures were placed on the jugular vein of a living dog, and there left for three hours: the blood had not coagulated.

"**Exp. IV.** Two ligatures were put on the jugular vein of a living dog, leaving a space between them of three inches. Then the lower part of the vein was cut through, and suffered to hang from the wound for four hours. The upper ligature was then removed, the blood admitted into the vein, and the ligature again tightened. The blood thus admitted into the dead vein was coagulated in a quarter of an hour."—pp. 83, 84.

These experiments favour the idea that the loss of nervous influence is the cause of the blood's coagulation.

"To ascertain," says our author, "what effect the vital, or lifeless state of the vessel has upon the blood's coagulation, I made the following experiments.

"**Exp. LII.** A portion of the jugular vein of a living dog was included between two ligatures, removed from the body, and immersed in water heated to 98 deg. At the expiration of an hour the blood which it contained was found fluid.

"**Exp. LIII.** To a long portion of the jugular vein of a dog, killed two days before, were affixed brass stop-cocks, and the whole immersed for a short time in water heated to 90 deg.—100 deg. The jugular of a living dog was then laid bare, and after its puncture, one stop-cock was inserted into the opening. A small current of blood having been allowed to pass through the lifeless vessel, in order to preclude the possibility of its containing any thing but the

subject of experiment, the lower stop-cock was turned, and shortly after, the upper. The vessel, with its contents, was then immersed in the heated water, the temperature of which was maintained for a quarter of an hour. At the end of this period, the vessel being taken out and punctured, or rather cut, over a white plate, the blood was found firmly coagulated.

"These experiments evidently lead to the same conclusion as those of Mr. Cooper. *Blood confined in a vessel, which, from the time, vitality could not have deserted, did not coagulate in an hour; while that inclosed in a lifeless vein, was firmly concreted in one-fourth of that period.*"—p. 85.

After mentioning some experiments, rendered inconclusive by the difficulty of determining how long parts retain their vital irritability after the apparent death of the animal, our author gives the following, in which are compared the effects of vessels undoubtedly alive, or unequivocally dead, on the blood they contain.

Exp. LVI. "A portion of the jugular vein of a dog was included between ligatures, removed from the body, and placed on the table. On its division, at the end of twenty minutes, the blood was found fluid.

"The character and result of this experiment resemble those of many others, several of which have been already detailed, (XLVI to LI.) Suffice it, therefore, to remark, that except in one instance, I never knew blood to coagulate in a vessel recently insulated or recently removed from a living animal: and from frequent examination, I feel confident that the blood in such circumstances will be found to retain its fluidity till the expiration of, at least, half an hour.

"Some observations on blood confined in lifeless vessels will now be stated.

"**Exp. LVII.** The iliac vein of a dog, killed three or four days before, was armed with stop-cocks, and received blood from the brachial vein of a man in the mode of Experiment LIII. On examination, at the expiration of a quarter of an hour, concretion was found to be complete.

"**Exp. LVIII.** A portion of the jugular vein of a sheep killed four days before, received blood from a similar vessel in a living sheep, in the mode of LIII. At the end of a quarter of an hour, complete concretion was found to have taken place.

"These experiments, when compared with LVI. and LII., strongly support the doctrine of the blood's fluidity depending on the life of its vessels. But to make the contrast more marked and decisive, the following experiments were made.

"**Exp. LIX.** Part of the jugular vein of a small dog was secured with ligatures, and removed from the body. After re-

remaining in the temperature of about 100 deg. for half an hour, it was punctured. The blood was found perfectly fluid. A portion of the vena cava was removed, and reserved for the next day's comparative experiment.

"Exp. LX. Fifteen hours and a half after the preceding experiment, the cava taken from the animal then employed, was filled with blood (as in LIII.) from the jugular of a similar dog. On the division of the vessel at the expiration of a quarter of an hour, complete concretion had occurred.

"Thus we remark, that for half an hour blood remained fluid in a vein recently removed, while in the lifeless vein of the same animal, it was found firmly concreted in fifteen minutes. To what shall we attribute this striking fact, if not to the loss of the vessel's vitality?

"On reflecting on the experiments of this section, it occurred to me, that the brass cocks connected with the lifeless veins might afford matter of objection. To ascertain whether they had any share in inducing coagulation.

"Exp. LXI. A length of the aorta of a dog, killed the day before, received the contents of the carotid of a similar, but living animal. The elasticity of the aorta allowing the admission of the divided carotid, no extraneous apparatus was required. Preventing therefore, with my finger, the admission of air, and one of my pupils pressing the lower end of the aorta, this vessel was quickly filled. My assistant was then directed to squeeze down the blood so as to empty the vessel; care being taken to exclude the air. The aorta was then re-filled, and ligatures being applied, was immersed in water, of the temperature of 100 deg. After a quarter of an hour had elapsed, it was divided, and complete concretion found to have taken place.

"It is apparent, therefore, that the same result occurs when stop-cocks are not employed.

"After the preceding illustrations of the opposite effects which the life and death of the vessels produce on the blood, a specimen succeeds of that intermediate state in which it is probable vitality is but partially existent.

"Exp. LXII. A portion of the jugular was taken from a sheep two hours and a half after it had been slaughtered. This vessel was filled with blood (as in LIII.) from a corresponding vein in a living sheep. After having been kept in the temperature of the animal for a quarter of an hour, it was punctured. Though most of the blood was fluid, one considerable coagulum was found.

"The inference drawn from the observations of this section is obvious. Experiments, in which the greatest attention was paid to accuracy in execution, and honesty in detail, have shown that blood retained for the requisite period is found fluid in a living

vessel, partially or irregularly coagulated in a semi-living vessel, and firmly concreted in one devoid of vitality. I conclude, therefore, that *the vital or nervous influence is the source of the blood's fluidity,—and its loss, the cause of coagulation.*"

It is singular that our author should use the terms *vital* influence, and *nervous* influence assynonymous—it is taking for granted the affirmative of a much disputed question—namely, whether the sympathetic nerve is the great centre of organic life—a question which is not likely to be settled, till minute anatomy shall have afforded us more accurate information as to the real extent and connexions of the ganglionic system.

The phenomena of many diseases seem to favour the opinion that the nerves exert a strong influence on the coagulation of the blood—such phenomena, however, would, on the whole, appear to lead to a conclusion directly the reverse of that derived from physiological experiments; in diseases where there is reason to believe that the nervous power is reduced to the lowest ebb, as in the worst forms of fever, malignant cholera, &c., the blood does not coagulate. Again, in those instances where the nervous power is suddenly annihilated throughout the system, as in death by lightning, a blow on the stomach, or a large dose of hydro-cyanic acid, the same uncoagulable state of the blood is observed. After all, such observations as these go far to establish the doctrine of the *vitality* of the blood—a doctrine which the longer one thinks on, the more one feels inclined to adopt. This seems to have been partly the case with Mr. Thackrah, who in some further remarks on this subject at the end of the fourth chapter, appears less opposed than formerly to Mr. Hunter's opinion.

The intelligent editor observes.

"The concluding passages of this chapter are written on a fly-leaf in the author's copy of his former edition. They are remarkable, as showing that his arguments against the Hunterian doctrine of life in the blood were by no means convincing to himself. 'What is life?' Reason on it as we may, the question still recurs to us. Blood is certainly not a mere hydrostatic liquid, but one possessed of certain functional susceptibilities, and acted on by vital powers. If a distinction can be made between the life of blood and the life of nerves, muscles, or bones, except in relation to their differ-

ence of offices, I am not able to perceive where the line of demarcation should be drawn."—ED.

Press of matter again obliges us to suspend farther notice of this valuable work; which, however, we shall take an early opportunity of resuming.

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ON DISLOCATIONS OF THE NECK AND THEIR REDUCTION.

BY E. HARRISON, M. D.

To Dr. Ryan, Editor of the London Medical and Surgical Journal.

SIR—The recent death of Lord Lisle from a fall in hunting, calls for a few remarks, especially at this season of the year, in order to prevent similar catastrophes from the same cause. "*His Lordship, it is said, pitched on his head, and it is supposed dislocated his neck, as he breathed only twice after the accident.*" Such is the brief recital of this nobleman's death. As it accords with many similar accidents from falls, I conclude that it is the true statement, and borne out by the anatomical arrangement of the parts. A few years since, Sir John Trollope, a Lincolnshire Baronet, lost his life upon the road by a fall from his horse. In neither instance does it appear that any means were attempted for their recovery, though it is upon record, that life has been preserved, or perhaps more properly restored, under similar circumstances.

I presume that every feasible scheme to recover persons in this distressing situation would at all times be favourably received by the British public. It is peculiarly applicable to the present season, when so many are liable to accidents in the perious recreations of field sports. Nor can we be insensible to the hazardous state of these momentous times, when all descriptions of people are roused into danger, and gallop about, hurry-scurry in every direction.

More than thirty years since, on taking my evening walk, I heard a loud cry for help issuing simultaneously from many mouths. I ran to the spot, and saw a man lying upon the ground. A horse was standing near: twenty voices anxiously vociferated, as I hurried along, that the rider had just fallen from his horse and broken his neck. He lay on the ground motionless and apparently quite dead. I instinctively placed my knees against his shoulders, and grasping his chin and back of the head firmly between my hands, proceeded to stretch his neck with all my strength. The patient immediately shewed signs of returning animation, by

moving his limbs, and in two or three minutes he raised himself from the ground*.

He at first rolled his eyes with a vacant stare, but speedily recovered sufficiently to remount his horse and ride home, a distance of nine miles, without sustaining any particular inconvenience from the accident. It may be said, that this man was only stupefied by the fall, and would have recovered of himself had he been left undisturbed. Whether the lifeless state to which he was apparently reduced, proceeded from vertebral subluxation, or concussion of the brain or spine, cannot be satisfactorily determined. For my own part, I then entertained the opinion that I still retain, that some of the superior cervical vertebræ, probably the first, were partially displaced, and pressed upon the spinal marrow or phrenic nerves, so as to interrupt the motion of the diaphragm, and the process of respiration. In that case, had he not been relieved from the compression, by restoring the natural arrangement of the cervical spine, death would have speedily closed the scene.

Had the suspension of life in the above case depended upon concussion of the brain or spine, the elongation of his neck would have been unavailing, and probably injurious. It was, I am convinced, a subluxation of the head and atlas, or first vertebra. The connection between these bones is easily deranged by a blow or fall, as we know from experience in brutes and man.

The sportsman kills his game by luxating the first joint of the spine, which always proves immediately fatal. This he effects by a smart stroke of the hand aimed below the occiput, and above the atlas. Or he accomplishes the disjunction by firmly grasping the back part of the animal's neck, close to the skull with his left hand, and fixing the other upon its forehead. A slight degree of force in this situation drives the condyles of the occipital bone away from the first vertebra and produces dislocation either partial or complete, according to the degree of violence employed.

Although few endeavours have been made in this country to restore animation in these distressing cases, the inhabitants of barbarous tribes do not abandon their comrades, without making strong efforts for their recovery.

Mr. Ellis, in the second volume of his *Polynesian Researches* informs us, on the authority of Mr. Baiff, "that a man fell from a tree and dislocated his neck. His companions, on perceiving it, instantly took him up. One of them placed his head between his own knees, and held it firmly, while the others, taking hold of his body, twisted the joint into its proper place." Such is the

* For a more particular account of the mode of treatment, see Dr. Harrison's *Pathological and Practical Observations on Spinal Disorders*.

statement given of the practice employed among a rude people, who, in following the dictates of nature, have often saved the lives of their fellow creatures, under circumstances deemed irremediable by the civilized nations of Europe.

The reader will perceive, that although both the above described methods have been successful in the restoration of life, they differ considerably from one another. It remains to be determined which is entitled to the preference.

The dislocation usually occurs in what is denominated a ginglymoid or hinge joint. This species of articulation admits of motion forward and backward. There is little or no lateral play. As therefore the head can only be luxated in two directions, forward or backward its position will always denote the species. In the former the chin rests upon the breast. In the latter it and the forehead are elevated.

By merely rotating the neck—the mode employed in the Friendly Islands—although the position of the head be changed, it does not follow that it had been moved in the best possible manner for the recovery of the patient.

The proper treatment is first to forcibly stretch the neck and head, in order to separate the different parts of the joint by elongating the ligaments. These, when suffered to contract again, will be disposed to restore the bones to their former or natural places. During the restoration, the head may be encouraged to move forward or backward, according to the ascertained nature of the dislocation. In order to ensure this desirable change, if fortunately a medical person were present, he might hold the upper part of the neck firmly with one hand, and assist in replacing the head with the other. This is the practice followed in other dislocations, and should be imitated in this particular species.

That the curative process is simple and easily carried into effect, even by persons ignorant of anatomy, will appear from the following case. An aged lady informed me a few days since that her mother, when young, was taking her accustomed airing, attended by a groom. The horse stumbled, and the servant, on falling to the ground, pitched upon his head. He sunk down motionless and apparently dead. The intrepid mistress seeing his alarming situation, jumped from her horse, and placing her knees against the man's shoulders, grasped his head with both hands. She then stretched his neck with all her strength. He instantly gave signs of returning animation. In a few minutes he remounted his horse and continued his ride. Nor did he suffer any injury from the hurt.

The above recited cases are the only examples that have come to my knowledge, where the attempt has been made in this country to resuscitate a human being, by

stretching the neck. As both trials were completely successful, I hope they will induce all persons near at hand to give immediate assistance on the occurrence of similar accidents, so as to ensure to sufferers the restoration of life when recovery is possible.

Holles Street, Cavendish Square.

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MEDICO - BOTANICAL SOCIETY OF LONDON.

Tuesday, January 27, 1835.

THOMAS EVERIT, Esq., Professor of Chemistry, in the chair.

Dr. Ryan, the Professor of Materia Medica to the society, delivered a lecture on the distinctive characters of organic or living bodies, and inorganic bodies, or those substances not endued with life. He stated that all bodies in the universe are divided by naturalists into two classes:—1. celestial bodies; 2. sublunar or terrestrial bodies.

a. The terrestrial bodies are composed of air, earth, and the waters, with all the material beings contained in them. These are again subdivided into, 1. organic bodies; 2. inorganic bodies.

Organic bodies are composed of organs different from each other: these form systems—the circulatory, respiratory, cerebro-spinal, &c.; the functions or uses of which preserve the individuals of each class of beings, repair their losses, and perpetuate their species. These bodies are again subdivided into vegetables and animals.

Vegetables possess nutritive and generative powers, but they have very partial motion, and never locomotion or the power of moving from place to place.

Animals, on the contrary, including man, not only possess the functions of nutrition and generation, but numerous relations, and a complete power of locomotion.

Animals, in general, are guided by instinct only, and do not possess individual intelligence or mind.

Man, the especial object of our study, is, by the superiority of his organization, as well as by his reason, an attribute peculiar to his species, placed immeasurably beyond all irrational animals.

b. Inorganic bodies are fossils or minerals; fluids, and gases.

Dr. Ryan then observed, "It is not as yet determined whether imponderable substances, such as light, heat, electricity, galvanism and magnetism have a separate existence; or are only manifestations of the activity of certain ponderable bodies."

All organic and inorganic bodies, he observed, the natural connexion of their phenomena, the reciprocal equilibrium of the different laws that govern them, form *nature*, *natural economy*; and united, constitute all that infinity which is denominated the universe.

The lecturer then described the external configuration and internal aggregation of

organized beings (plants and animals), and inorganic substances, and proved the vast difference between them. He enumerated the chemical composition of both, of plants and animals, and of minerals, &c.

In animals, the constituent elements or principles are oxygen, hydrogen, carbon, and nitrogen; and in vegetables, oxygen, carbon, and hydrogen; but in a few, a small quantity of nitrogen or azote. Besides these, there are non-metallic alkaline, earthy and ponderous metals. There are also imponderable substances or principles: light, heat, electricity, and galvanism.

The professor next proceeded to institute a comparison between organic and inorganic bodies. He enumerated a host of physiologists, philosophers, and chemists in ancient and modern times, who maintained the conclusions which he drew.

Having proved the widest distinction between organic and inorganic bodies, he then described the difference between plants and animals, or organized beings. He contrasted their origin, figure, type common to species, constituent elements, unity of organization, transmission of existence and decline.

The chairman proposed to the society, that the learned professor be requested to resume the very interesting subject which he commenced this evening.

Dr. Sigmund, Dr. Negri, and Dr. James Johnson commented on a specimen of some medicine which was on the table, and which had not a place in our *Materia Medica*.

The chairman then announced that Mr. Burnett, the professor of botany, would deliver a lecture at the next meeting, Feb. 12.

Foreign Medicine.

M. Roux's Account of his Travels in Switzerland and Italy.

At the request of the members of the *Academie de Medecine* this distinguished surgeon related to them at several of their sittings, the principal points for observation in the localities through which he passed in his tour in the above named countries, with, of course, a special reference to the medical affairs.

Commencing with Switzerland, M. Roux, went at great length into the practice of M. Mayor of Lausanne, particularly as to his mode of surgical bandages. M. Mayor denies the spontaneous luxation of the femur, and attributes the shortening of the limb to an irregularity of the pelvis and the vertebral column—an opinion from which M. Roux differs, though he thinks that further researches should be made on the subject.

At Geneva a second M. Mayor made some important communication to the travellers. The first was regarding the *hydrocele of the neck of M. Maunoir*, which is a cyst of the thyroid gland; it is endemic in Switzerland, but is never observed in France. It com-

mences in one side of the gland and gradually extends to the other. When the tumour bursts or is punctured, a thick coffee-coloured fluid escapes; this is succeeded by a sanguineous effusion into the cyst, or else it is poured out: the effusion is an exudation, and not the consequence of any ruptured vessel. When the cyst is filled, the bleeding stops, in consequence of the compression of the parietes. M. Mayor, therefore, adopts the following treatment. Having emptied the cyst by means of the trochar, he stops it with agaric in order to prevent the oozing around the canula, which he also stops hermetically. The secreted blood coagulates, subsequently becomes fluid and is then allowed issue by opening the canula. The parietes of the cyst afterwards suppurate and finally adhere together; the cure is somewhat prolonged, but is certain.

M. Mayor has also paid particular attention to *inraginated necrosis*, which is more frequent in Geneva than in Paris. It is generally considered best to wait as long as possible before the operation for removal of the sequestra, which is more loose and thin as the affection is of longer standing. M. Mayor, on the contrary, thinks that the separation is complete from the commencement of the disease, and previous to the complete solidification of the new bone; he therefore is of opinion that the operation should be performed at an early date, because the instrument acts with greater facility on the non-solidified bony envelope.

Proceeding to Italy, M. Roux, examines in succession the institutions, the noted men, and the circumstances of the country. In the first are comprehended the academies, universities, and hospitals. M. R., it is necessary to remark, only visited the North of Italy, Milan, Padua, Florence, Brescia, Venice, but did not reach Rome and Naples.

With regard to the academies, M. Roux states that he was not able to visit them, and that he needed no consolation on that account.

In France there is but one university: in Italy there is one, and sometimes several, in each small state. Thus, there are seven in the Roman States; and the confusion in this particular is so great, that the doctors of the University of Sienna, for example, cannot obtain the license to practise until they have studied two years at Florence, where there is no university, but where the means of instruction are much more perfect.

Each of the universities include four faculties: that of medicine comprehends pharmacy. The principal ones are those of Pavia, made illustrious by Scarpa; of Padua, where Fabricius ab Aquapendente and Morgagni flourished; of Bologna, which is much fallen off since the late political troubles, the consequence of which was its dismemberment. It may be easily imagined that each of these universities is far below that of Paris in the number of students.

The largest number in any of them scarcely reaches four to five hundred students, whereas that of Paris includes more than three thousand, that is, more than all the Italian students together. The mode of teaching is pretty nearly the same as in France, with a few slight modifications. Eye-surgery, as a separate department, has been recently introduced from Germany, and the inspection of this special teaching only tended to confirm M. Roux in the prejudices he had long entertained against these mincings of science. It is worthy of remark, that each professor is obliged, in his lectures, to follow the plan and order laid down in the work which he uses as a textbook, a species of intellectual slavery much reprobated by the author, but in which he found a cause for exultation, since these works are, for the most part, French productions. These faculties admit three orders of practitioners, doctors of medicine, masters of surgery, and *petty* surgeons, the latter corresponding to the French *officiers de santé*.

Most of the universities are provided with magnificent collections, among which those of Bologna and Florence are particularly fine. That of Pavia is remarkable for the anatomical preparations; that of Florence for wax mouldings. Each hospital has a dissecting theatre. The students are not allowed to dissect in the first year of study, but are confined to looking on the older students. At Florence there is also a superb collection of works referring to the physical sciences; in it the instruments used by Galileo, Galilei, and Toricelli, are preserved: they are about to deposit them in a particular cabinet. Indeed, the Italians profess a religious veneration for their great men, and erect monuments and statutes to them. This enthusiasm, however, is sometimes outrageous; nor was it without a painful sensation that M. Roux beheld the head of Scarpa macerating in alcohol, among other anatomical preparations. Apropos of this subject, he relates a peculiarity found on the post mortem examination of the illustrious Italian surgeon, who, previous to his death, at eighty-four years, had lost the memory of proper names; on examining the contents of the cranium, a considerable disorganization of one of the corpora striata was found.

The organization of the hospitals in Italy presents some remarkable peculiarities. They are almost all erected in advantageous positions, and have large well ventilated wards: those for surgical diseases are separate, and are generally less carefully attended to. The great hospital of Milan probably has not an equal in Europe in regard to the architecture and extent: it contains with ease 1800 patients. These hospitals, moreover, include separate chambers for such as can afford to pay for them.

The medical hierarchy is in full vigour in the Italian hospitals: there are honorary physicians, assistants, sub-assistants, first

physicians, directors of the establishment, &c. In difficult cases the physicians meet in consultation under the presidency of the chief. It may be remarked that in this classical country of devotion, the hospitals are not deprived of the services of the *religieuses*. The union of powers in the director, who is generally a distinguished physician, whom age has rendered incapable of practice, simplifies exceedingly, and facilitates the arrangements of the hospitals.

Though Italy is far from being devoid of distinguished medical men, there are none of them whose reputation can be balanced against that of such men as Scarpa, Vacca, Bellinghieri, Paletta, and others. Of those possessing the greatest name at present is Professor Panizza of Pavia, who in anatomy at least is proceeding in the brilliant pathway of Scarpa.

M. Roux paid particular attention to the state of normal and morbid anatomy, midwifery, and surgery, towards which his tastes inclined him. Anatomy is cultivated in Italy with the greatest ardour; the country abounds with museums, with which those of France can stand no comparison. The museum of Pavia is especially remarkable, enriched as it is with the numerous undertakings of the great Scarpa. A vast number of beautiful preparations of the structure of the bones are particularly prominent. It also contains the lower limb of the individual on whom Scarpa first put in practice his mode of operating for aneurism, which, as is known, is by ligature in the inguinal space; the patient survived the operation twenty-five years. The successor of Scarpa, Panizza, has repeated Mascagni's experiments on the lymphatic system. His discoveries on this head have been more particularly interesting with regard to the lymphatics of the generative organs. Nor are his researches into the nervous system less important, one of the preparations shewing with the greatest exactness the connection of the nerves of the great sympathetic with the anterior branches of the spinal nerves. But a still more important result of his injections is the proof that the serous membranes are eminently vascular—a fact denied by many physiologists and anatomists, who look upon those membranes as inorganic, as a kind of epidermis placed over the vascular tissues beneath.

At Bologna, M. Roux was struck with the preparation of a head of immense proportions that had belonged to a body of ordinary size: the individual had exhibited nothing unnatural in his intellectual faculties.

At Florence, in the cabinet arranged by M. Zanetti, M. Roux saw the following preparations. 1. A skull perforated by a dagger, which caused the inner table to project an inch into the cerebral cavity, without however inducing any particular cerebral lesion; the person survived a long time with the steel fixed in the bone. 2. Two

pieces, which shewed to demonstration the indentation of the cranium, without fracture. 3. The womb and pelvis of a woman who survived one Cæsarean operation, but died after the second. 4. The head of a hydrocephalic child, containing thirty-two pounds of water. 5. A radius, the diaphysis of which is covered with a bloody fungous tumour which had been mistaken, in life, for an aneurism.

In all the Italian faculties there are obstetric clinical courses. At Milan, M. Roux saw two placentas continuous with each other: it had occurred in a twin case, and is a fact, the existence of which has been frequently denied; it justifies the practice advised by M. Capuron of tying the cord of the first born child. The director of the maternity of Milan, M. Milly, told M. Roux that out of several Cæsarean operations he had been twice successful. There is in the same place a very fine collection of ill-shaped pelvises. M. Milly observed, that when the deformity of a pelvis consists in an obliquity of one side coinciding with a narrowing of the same side, there is always a complete ossification of the corresponding sacro-iliac symphysis; so that symphyseotomy would prove useless in such a case.

With regard to surgery, the Italians care little for French or other doctrines; those of Scarpa are exclusively predominant. Lithotomy is scarcely known; M. Roux only met one surgeon that had performed it twice. But what is most astonishing is, that the operation for cataract by extraction is totally unknown in Italy. At Florence M. Andrini shewed M. R. an individual in whom he had cured an aneurism of the crural artery by Valsalva's method, the general debility not allowing of his operating. At Venice he saw a man who had fallen from a high scaffolding with the back of his neck against a stone two square inches thick, which divided the skin and muscles and forced on to the vertebræ, without fracturing the bones and causing mischief of the brain or cord; the man was perfectly recovered. M. R. also saw a leg that had separated by sphacelus, after compound fracture; likewise, at Milan, a varicose aneurism of the bend of the arm, cured by tying the brachial artery above it. M. Roux succeeded in reducing a complete dislocation of the fore arm, that had continued for five months. It had every appearance of being ankylosed, but, having been successful in similar cases before, he attempted and effected the reduction; the arm was restored to its functions.

Microscopical Observations on the Organization of Animals.

M. Ehrenberg, of Berlin, in a late work, maintains that it is impossible, with our present means of observation, to demonstrate the existence of a primitive animal matter, as mentioned by authors. In his examination of infusoria, and even of the most simple of them, he found so complicated an organiza-

tion, as to preclude the idea of a spontaneous generation. The learned author also makes known three new families, 35 genera, and 135 species. He adds some new facts to those already ascertained concerning the organization of infusoria. He has discovered masticatory organs in the *infusoria polygastrica*: these organs had been previously only noticed in the *ratifera*. In the *polygastrica*, he also remarked two globular radiated organs, which he considers to be the male generative parts. He has also remarked organs in the *ratifera*, which he looks upon as the respiratory; and he moreover asserts that a nervous system is to be found in all the *infusoria*.—*Archives Generales*.

Researches into the Crustacea, &c., by Dr. M. Edwards.

In a letter addressed to the Académie des Sciences, Dr. Milne Edwards, gives some of the results of his voyage to the coast of Barbary. His principal object was to make researches into the crustacea, annelides and zoophyta, an object in which he does not appear to have failed.

I have ascertained, he says, that polypi, living in one collected mass, have generally much more close connexion with each other than is commonly believed. Far from being merely conglomerated individuals, they possess, in the majority of instances, a perfect individuality. They are a kind of sprout, which, at the same time that they are capable of living in an isolated state, have only a portion of their organs in common, and which grow on certain parts of the trunk and branches of the polypus stalk, without becoming altogether distinct from their originals. M. Edwards has discovered the means by which nutritive matters, taken by one of these polypi, may generally be useful to the whole group; and he has ascertained the parts of their body that are endowed with the vegetative faculty; on which fact, the general disposition of the polypi stalk depends. He has also inquired into the mode of formation of the ovula, by which these animals are reproduced, and their race propagated. This double mode of reproduction, (by sprouts and ovula) seems to exist both in the zoophyta and the complex ascidia.

M. Edwards' observations promise to throw some light on the formation of the solid parts of the polypi-stalk: they will also bring forward some new genera.—*Gaz. Med. Janvier 17th*.

Verminalion a cause of Mania.

M. Ferrus lately exhibited a *tania* to the Académie de Médecine, which he had purged from a maniac. Immediately on its expulsion the insanity disappeared. Several members recited instances in which the insanity of hysterical persons has been cured by the evacuation of the *tania* and other intestinal worms.

The London Medical

AND

Surgical Journal.

Saturday, January 31st, 1835.

EDIFYING PARALLEL.

WE recommend the following extracts from M. Sabatier's recent "History of the Faculty of Medicine of Paris" to the perusal of the exclusive gentry of the Faculty of Medicine of London, to whom we would remark—

Mutato nomine de te fabula narratur.

"One of the most pressing orders given to the young doctors, was to engage in nothing but their own art, and not to enter upon any occupation alien to it. Unfortunately surgery (*add midwifery*) was comprehended in these profane occupations, which lowered the dignity of the physician, a calling the utility of which they estimated from the time when it was part of the barber's art, but which it was folly to reject when this rival science became as high in Paris (*London*) as medicine.

Disputes kept hot by party spirit against the Montpellier physicians (*Edinburgh graduates*), and influencing even scientific and practical questions, presented so many subjects for laughter to the common enemy of all the Faculties, Moliere (*Wakley*). Some Montpellier physicians (*Edinb. grad.*) having settled in Paris, the Faculty claimed *the privilege of their members alone to practise in the capital*. Hence arose law cases, pleadings, paper wars, and abusive language. The newly-arrived physicians employed tartar emetic: the Faculty proscribed it. *The Parliament was obliged to sit in judgment on their disputes*. The association of new physicians resisted for twenty years the actions, and even the verdicts given against them. At length the Faculty appealed to the royal authority itself, and Louis XIV. re-instated them in their privileges.

"Happy had the Faculty been if their long delayed and dearly bought victory had dissuaded them from fresh disputes! *But all privilege has a tendency to aggrandizement, and every monopoly is in its nature intolerant!* The Faculty rejected opium, mercury, and bark, as it had rejected tartar emetic, because they came from another source

than themselves. *It was a kind of inquisition erected in medicine, which aimed at the imposition of its dogmata, the foremost of which was the recognition of its infallibility.* And when at length, spite of all their efforts, these remedies were admitted by royal decree into the *Materia Medica*, Guy-Patin (*H. Halford*), that valiant champion of the privileges of his order, was nearly dying of vexation. *Meantime the 18th century was dawning, a century fatal to many privileges, and particularly to those of the Faculty.*"

But Maréchal and Lapeyronie roused the spirit of surgery:—

"In 1774 the first stone of the College of Surgery was laid, which is now the *Ecole de Medecine*; and by a singular coincidence, in the very year when the Surgeons took possession of their Hall, the Faculty was obliged to quit its premises in the Rue de la Bucherie, which *three centuries of dust and dilapidation threatened with ruin—the mournful forerunner of the fall of the Institution itself!!*"

How like our kindly, but short-sighted friends in Pall Mall, is all this! The rejection of opium, tartar emetic, &c., is a fit type of the rejection of all reforms, however wholesome and satisfactory. The Parliament judged of the Parisian as the Parliament will judge of the London Faculty: let them look to this: nor let them hope from any appeal to the royal authority—these are not the days for the reckless use of the latter, nor for the corrupt judgment of the former. Our appeal is to the common sense and sense of common justice of the community, against the glaring nonsense and flagrant injustice comprised in the privileges of our Faculty. How humiliating is it to think that both should have been opposed and exposed by the French medical reformers so far back as 1680, while in this our land the same nonsense—if different, only more outrageous—and the same injustice—but greater in degree by comparison with the enlightened age—are allowed still to flourish, and lord it over the brains and feelings of highly educated and philosophical men!

The French Faculty quitted their premises when, like their privileges, they were about to fall about their ears! Picture them collecting their musty charters and moth-eaten tomes, and marching with bag and baggage to their new quarters, consoled, no doubt, in this novel species of ejection, with the hope that their removal to a more modern edifice would be taken as an image of renewed vigour in their body corporate! Picture their lugubrious countenances and "long-drawn windy suspirations," on finding themselves shivering with dignified frigidity in the unfrequented halls of their new College, tottering under the weight of mortgages entailed by their removal, and listening with anxious ears to the popular voice from without, expressed now by laughter, that pierced the very stone walls and rang through the echoing chambers; now by groans of contempt, whose deep-toned resonance was but poorly adapted to soothe their perturbed spirits! Picture all this of a past Faculty, and you have a tableau vivant of a present one—of a set of living creatures to be found in Pall Mall. There is something in this like a metempsychosis, or transmigration of souls—the souls of the old Faculty of Medicine of Paris have surely passed into the bodies of our existent friends of the above-mentioned address: the same addled pates, the same dignified stolidity, the same troubles and "pressure from without," the same emigrations with the same motives, fall to the lot of both! Nay, the very President of the "*ancienne Faculté*," the very Guy-Patin, "that valiant champion of the privileges of his order," lives again in our Sir Henry! And had M. Sabatier deigned to give us the personal appearances and history of the worthies whose acts and misfortunes as a corporation he so well relates, doubtlessly we should have found many of them "*redevivi*" in the elegant faces and forms, the tall and lordly statures, the expanded smiling

countenances of our modern fellows, together with all that *liberal* character of mind which distinguishes the members of *our* modern Faculty.

Why do not these persons read? Why do they not look to the history of bodies like their own, and gather instruction from them? They would find, for instance, in M. Sabatier's history, that the revolting stupidity and arrogance of this Parisian Faculty at length brought together the enlightened part of the profession, for the purposes of defence; that from acting on the defensive they became the assailants, and at length formed themselves into a formidable body, patronized by the reigning powers, and denominated the "*Société Royale de Médecine*," of which the justly celebrated Vicq. d'Azyr was President. They would find, that though the privileges of the Faculty were not abrogated, yet, as they existed *in spite* of the spirit of the age, they passed into a dead letter, while the newly formed corporation daily increased in the esteem of the thinking and enlightened. But, lest they should doubt this, we will quote the words of the history itself.

"The Royal Society of Medicine, more youthful, more vigorous, keeping pace with the ideas of the age, had no difficulty in outstripping a decrepid institution in which the course of study and lectures was still continued according to ancient statutes. In this manner the number of pupils diminished; the lectures were deserted; and when in the midst of the political whirlwind of 1792, a law declared that the Faculties were abolished, that of Paris left no regrets—the law had only annihilated a corpse."

Some politicians say that a whirlwind is approaching our institutions: we hope it will only blow about Pall Mall East. But the historian asks—

"How happened it that this Faculty, once so powerful and so celebrated, came to be reduced to a state of exhaustion by which it would shortly have expired, even had no revolution crushed it?"

"Oh!" cry the Fellows, "they did not prosecute enough: they should have made more gagging bye-laws, and acted upon them, and thus tamed the spirit of the age to themselves, instead of yielding to it. Because they neglected this they fell." We apprehend, however, that M. Sabatier gives a more rational answer to his own question: it is this, and should be engraved on the memory of the "Fellows."

"It was because, in institutions as in men, movement is the condition of life: we must be progressing if we would not remain and die."

Messieurs the Fellows! "read, mark, learn, and inwardly digest" this physiological maxim.

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MEETING AT THE ROYAL COLLEGE OF PHYSICIANS.

THE first meeting of the Royal College of Physicians, which included a heterogeneous class of visitors, took place on Monday last, January 26th.

SIR HENRY HALFORD in the Chair.

The celebrated Baronet had had most of the Cabinet Ministers and genuine Tories to dine with him, and afterwards to accompany him to Pall Mall East. Sir Robert Peel, the Lord Chancellor, Lord Abinger, Chief Justice Tindall, the Bishop of London, and many of the rankest Tories were present. The library of the College was crowded to excess; about 700 persons were present, most of whom were anxious to have a look at the lions of the evening.

The renowned Chairman and President of the College read a paper of his own, on the diseases of eminent modern characters, giving an account of the diseases of all the English monarchs, from Henry VIII. to George III.—the case of our late revered master, King George IV., was passed by, lest the present monarch should feel pain by allusion to his predecessor. The cases of Dryden, Addison, Swift, and the

Duke of Gloucester, made up the rear, though all the newspapers placed the names of these distinguished individuals in a different order.

The letter written by Geo. III., of which Sir Henry was the bearer, to the Princess Amelia, who died in two days afterwards, "was an inheritance of example" — an inheritance of example left to posterity. Shakespeare, of collegiate medical authority, was freely quoted, and a few Latin quotations, read most pedantically, astounded some of the auditory. Upon the whole, the meeting was inimitably got up: the histories of the diseases of several kings, and the medical treatment detailed in plain language, must have interested the non-professional nobility, judges, &c. It is but justice to state, that though we despise the antiquated and bad policy of the President and Fellows of the College of Physicians in their official capacity—and many of them are our personal friends—we are bound to admit, that when Sir Henry Halford is conveyed to the tomb of his ancestors, we know no one of his order (medical) who is qualified to succeed him as President of the College, or any one who could have Whigs or Tories, it matters not which, so much under controul. We expected every moment an eulogium on the present Ministry, but our contrast of Sir Henry's fulsome adulation of the Grey after the Wellington Administration, produced the desired effect.

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Hospital Reports.

ST. GEORGE'S HOSPITAL.

Operations—Submucous Erectile Tumours—Division of Palmar Fascia for contracted Fingers.

A YOUTH, aged 18 years, was brought into the theatre, having one of those tumours, of considerable size, generally known by the name of *nævi materni*, which was situated at the inner angle of the mouth. It was congenital, but had of late, years very much and rapidly increased in size. The

tumour is scarcely perceptible on the exterior of the face, its existence being only distinguishable by the blue livid colour to be perceived through the skin at that point. On everting the angle of the mouth, a large irregular tumour is brought into view, of about the size and somewhat of the form of a poached egg, which implicates the sub-mucous cellular tissue of the gums. It would hence, from this description appear, that the tumour ought to be regarded as an instance of the accidental erectile tissue being developed in the sub-mucous, rather than in the subcutaneous cellular tissue. The tumour having these extensive attachments, Mr. Hawkins was dissuaded from attempting its extirpation by the knife or ligature, and hence adopted the plan of dividing the tumour extensively, with the view of exciting the process of adhesive inflammation. He took a very small and narrow knife, (somewhat like a cataract knife) and introducing it through the integuments, about two inches behind the angle of the mouth, passed it into the very centre of the tumour, which he divided very extensively, by passing the knife backwards and forwards in almost every possible direction. By this means the object was effected, without making any external wound, beyond the small puncture necessary to admit the knife, nor did any hæmorrhage occur.

After the operation, Mr. Hawkins made a few remarks on the various modes of treating this variety of tumours; by excision, by ligature, by vaccination, by the seton, by caustics, and by the mode in this instance adopted—division.

A patient was now brought into the theatre, having a contraction of the little and ring fingers of the right hand upon the palm, from that affection of the palmar fascia, for the precise knowledge of the nature of which, we are principally indebted to the dissections of the Baron Dupuytren, though it appears that Sir A. Cooper had previously identified the disease. Mr. Hawkins proceeded to perform the operation of dividing the fascia, as practised by Dupuytren. He commenced by making a transverse incision about an inch in length, through the integuments of the palm, corresponding to the centre of the last metacarpal bone. By this means the outer strip of the fasciæ, passing to the little finger, was exposed, and was now freely divided. A considerable degree of the abnormal state of flexion was thus removed, but as some of it still remained, another semi-circular incision was now made at the base of the little finger; and the two diverging strips of fasciæ divided, just as they are about to be implanted into the lateral ligament. In this way, the flexion of the little finger was almost entirely renewed, and a corresponding incision of the integument, and division of the internal strip of fascia, passing to the ring finger was found to be sufficient to ob-

viate that of the finger in question. It was, however, thought advisable to make a longitudinal incision through the skin, so as to divide the integument; this was done, and it was found thickened to the extent of nearly half an inch. Strips of lint were now placed in the incisions, and ordinary dressings were applied. The hand was directed to be kept constantly extended upon a splint, by means of a roller; and Mr. Hawkins hopes that by maintaining this position until cicatrization shall have been established, that a cure will be effected.

Addition to the Report of the Rhinoplastic Operation, performed by Mr. Keate.

20th. Since the operation was performed, a slight erysipelatous inflammation has attacked the integuments of the face, including the flap. Adhesion, however, appears to be taking place to a considerable extent. To-day Mr. Keate removed the ligatures, in doing which, a slight prick or two of the scissors shewed that the circulation in the flap was vigorous. On touching the skin of the flap, the sensation is referred by the patient to the part of the forehead over the left eyebrow, from which the flap was taken. An evaporating lotion of rectified spirits of camphor mixture is kept applied to the face, and he is taking saline draughts, with tartarized antimony. He appears to be in good health, and complains of being starved, only being allowed broth diet.

24. The case is going on very favourably: the erysipelatous inflammation has almost entirely subsided, and adhesion has taken place throughout the circumference, with the exception of a spot or two at the points of reflexion of the flap. The man's general health is very good.

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WESTMINSTER HOSPITAL.

Venereal Phagedæna of the Upper Palpebra, with Clinical remarks by Mr. Guthrie.

ELIZABETH HOLLIS, aged 21, presented herself amongst the out-patients, on January 5th, with extensive inflammation and ulceration of the left upper eyelid. She is of a pale complexion, and of a leucophlegmatic habit; and states that she obtains her livelihood by working in the gardens at Brentford. She strenuously denies ever having had any syphilitic disease, to which source, notwithstanding, Mr. Thomson attributes the affection. About a fortnight ago, she states, that she first noticed a little pimple or two, about the size of pin's heads, upon the margin of the eyelid; that these gave a little pain, became red and enlarged; that with this, the conjunctiva became injected, (or to use her own expression, "the eye became blood-shot"); and that these

symptoms have gradually increased until they reached their present intensity. At this time the eyelid is in a highly inflamed state, being extensively swollen, and of a dusky-red colour; presenting on its ciliary margin several spots of creeping ulceration of a dirty-yellowish colour, and which are principally seated near the external canthus; these secrete an unhealthy looking pus. Two of these patches are very large, and extend in the form of deep and broad fissures, into the eyelid, having involved much of the actual substance of the tarsal cartilage. The inflammation of the lid has most of the characters of œdematous erysipelas, and extends upwards as far as the supercilium. The conjunctiva is highly injected, but there is no chemosis; the eyeball is suffused with an excessive secretion of hot and acrid tears. With these symptoms is combined excessively acute pain in the organ, and intolerance of light. The internal structures are not at present implicated.

The bowels have been constipated since Thursday; she has no appetite; the tongue is slightly furred; pulse 60, and feeble. She complains of having been troubled with shivering, and pain in the limbs.

7th. She was received into the hospital yesterday, since which she has admitted having had venereal sores on the labia and internal organs during the last five weeks. Mr. Thomson has therefore decided to treat her case as one of a secondary symptoms, and has directed her to take the following pills:—

Rx. Hydrarg. submur., gr. ss,
Opil Pul. gr. ½ M. ft. pil.

Secundâ horâ sumendâ.

He has also directed the application of the celebrated unguentum nigrum, vel argenti nitratis, of Mr. Guthrie. The bowels have not yet been relieved.

10th. The eye remains much the same; she complains still of excessive pain; there is no ptyalism. The ointment is changed for one of calomel, and the quantity of opium in the pills is doubled; she continues taking them every second hour.

Mr. Guthrie, in the perambulatory clinique, observed that the case was a highly interesting one, and of very unusual occurrence; but by a singular coincidence, there is another similar case at the present time at the Ophthalmic Hospital. In about 24,000 cases of eye-disease which he had seen, he did not suppose that he had met with more than nine or ten such cases. He considered it to be of decidedly constitutional origin.

12th. The pain and redness of the eyelid all evidently diminished. She complains of a metallic taste, and of soreness of the mouth and throat, but there is no increased action of the salivary glands as yet.

14th. The soreness of the mouth and throat is increased, though there is but little ptyalism. The local affection is, however,

much benefitted, the conjunctival inflammation has entirely disappeared, that of the palpebræ is also much relieved; the organ is much more tolerant of light, and the pain likewise much diminished.

16th. Salivation to a slight extent is established; she continues to improve, but complains of pain in the head.

19th. The ptyalism is more severe, but not even now profuse, though she continues the calomel: since last report the eye has continued to improve; the progress of the ulceration is entirely checked, and the ulcers have lost their corroding and unhealthy character, and are now rapidly filling up with healthy granulations; cicatrization is also taking place at their margins. The surrounding inflammation of the palpebræ has also nearly disappeared, a mere chronic sort of tumefaction alone remaining. Indeed it is surprising to observe the rapid and decided amendment which has taken place in so short a time.

20th. Mr. Guthrie, to-day, gave a clinical lecture on the two cases which are now under his care, the one at the Ophthalmic Hospital, and the other, which forms the subject of the present report. He observed, that he did not regard the ulcers which formed upon the eye-lids in these cases, as primary sores, nor yet even of the first order of secondary symptoms: they appeared usually after the cutaneous eruption and sore-throat; they commenced generally in the form of a little pimple or sty, which he was disposed to consider a mere common hard column, which from the constitutional taint subsequently takes on a syphilitic character. In a short time the sty becomes a rapidly corroding ulcer of a yellowish-white colour, which would rapidly eat away a great portion of the eyelid unless quickly placed under treatment. This characteristic ulcer is surrounded by considerable tumefaction and inflammation. He generally observed it to attack the outer rather than the inner skin of the eyelid, and also, as in these cases, to affect that part adjoining the inner, in preference to the outer canthus of the eye. The affection was generally attended with a peculiar cast of countenance, highly characteristic of the existence of the syphilitic virus in the system, and which would usually enable the practitioner to distinguish it from a carcinomatous and other forms of ulceration of the palpebra sometimes met with, but which possessed their own distinctive characters. In both these cases the patients had at first resolutely denied labouring under syphilis, but in both cases, on more close inquiry, the suspicions entertained from the character of the inflammation were found to be well founded. They have both been treated in the same manner, with calomel and opium, and have both yielded with surprising facility upon getting the system under the influence of mercury.

Mr. Guthrie entered somewhat into the detail of the history of the case which had occurred at the Ophthalmic Hospital, but as it is almost a direct counterpart of that now reported, we need not introduce it.

24th. The eye is now nearly well.

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NEW PHARMACEUTICAL PREPARATIONS.

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It is well known that the infusions and tinctures prepared according to the pharmacopœias are often unchemical, and, in general, very liable to decomposition. The following preparations, on account of the advantages which they afford both to prescribers and compounders of medicine, are respectfully submitted to the notice of medical practitioners, by J. Bass, Pharmaceutical Chemist, Hatton Garden.

Essence of Senna.—One part of the essence of senna mixed with seven parts of water, will produce infusion of senna in every respect similar to that prepared according to the direction of the London Pharmacopœia. It will entirely obviate the waste, trouble, and delay which attend the ordinary process of preparing that infusion, and will also enable the practitioner, in exhibiting it, to increase the strength without adding to the bulk of the dose.

The process by which this essence is obtained, has been arranged expressly to secure the purgative principle of senna from the deterioration inevitably occasioned by exposure to the air and to high temperatures.

(From the account of Bouillion Lagrange, it appears that the active medicinal principle of senna, when obtained in a separate and diluted form, combines rapidly with the oxygen of the atmosphere, forming an insoluble compound, which is entirely devoid of efficacy. By the application of heat, this injurious action is accelerated, and it is therefore obvious that any attempt to obtain a concentrated form of infusion of senna, by the means usually employed for obtaining vegetable extracts, must prove a complete failure. Colladon, in his elaborate work on senna, states that a watery infusion of the leaves, exposed to ordinary evaporation, is diminished three fourths in cathartic power. This explanation the proprietor of the *Essence of Senna* considers highly important, many imitations having been brought forward, which are obviously results of a common heat applied to senna, a most destructive process.)

In proof that this object has been accomplished, the proprietor begs to refer to the public recommendations inserted in former editions of his paper, as well as to numerous private testimonials from practitioners of eminence.

Concentrated Infusions of Chamolile, Orange Peel, Calumba, Cloves, Cascarella,

Cusparia, Gentian, Quassia, Rhubarb, Roses, Simarouba.

The infusions ordered in the London Pharmacopœia are principally watery solutions of the more delicate volatile and extractive parts of certain vegetable matters; and the process directed, that of maceration in water, at a temperature diminishing from the boiling point, is obviously intended to preserve those parts which continued coction would injure or dissipate, as well as to prevent the solution which it might effect, of such as would be useless or disadvantageous. It is, however, well known, that the strict and uniform observance of the directions given in the Pharmacopœia, simple as it may appear in theory, is practically difficult, if not impossible. Amidst the constantly recurring urgencies of medical practice, infusions are often unavoidably produced in a very defective state, from the impossibility of allowing them time for sufficient impregnation, and of attending properly to the comminution of the material infused, as well as to the purity, temperature, and uniform action of the water. And, apart from the labour and delay necessarily incident to the common process of making infusions, a considerable loss is frequently incurred, in warm weather particularly, from the rapid decomposition of that portion which is not immediately wanted.

The concentrated infusions above enumerated, which merely require to be diluted in the proportion of one part to seven of water, will completely relieve compounders of medicine from these inconveniences, by enabling them to produce, at a moment's notice, and without trouble, infusions of *full and uniform strength*.

Concentrated Decoction of Sarsaparilla, simple and compound.—The concentrated decoction of sarsaparilla will remove the necessity for a very tedious and complicated process. The means employed to render the preparation a perfect educt from the best variety of sarsaparilla, will it is hoped, preclude a recurrence of the disappointments which have sometimes accompanied the exhibition of that medicine, and which probably have been attributable, in most instances, either to inferior quality of the root, or to mismanagement in the treatment of it.

Independent of the value of the concentrated decoction of sarsaparilla in facilitating the business of the Dispensary, it is particularly adapted to the use of persons going abroad, or who may be otherwise so situated as to be unable to obtain the ordinary decoction.

One part of the concentrated decoction is to be mixed with seven parts of water, to form the decoction of sarsaparilla of the London Pharmacopœia.

Essence of Cubebs.—The form of powder, in which cubebs are usually given, has been frequently found objectionable; first, be-

cause, from exposure to the air, the powder, however carefully prepared and kept, loses in a greater or less degree the volatile parts upon which its effects are supposed to depend; and, secondly, because it is in some cases impossible to give it to the requisite extent, on account of the mechanical irritation which it produces.

The essence now recommended contains the whole of the essential oil and resinous extractive matter of cubebs. It may be depended upon for perfect uniformity of strength, and, without being liable to the ordinary objections against the cubebs in substance, it will produce the specific action for which they have been so distinguished. One drachm of the essence is equal in strength to two drachms of freshly powdered cubebs, and it may be given either in water or milk, or in the form of an emulsion, to which it is well adapted, with yolk of egg or mucilage of gum arabic, and distilled water.

Concentrated Essence of Camphor.—This essence being miscible with water, is extremely convenient for making camphor julep, and for combining camphor with fluid forms of medicine. Thirty drops by measure, added to two ounces of distilled water, will form camphor julep of the usual strength.

Essence of the Ergot of Rye.—Four fluid drachms of this preparation are equivalent to one drachm by weight of the powdered ergot.

Essential Oil of Copaiba.—Dose—From fifteen to thirty drops.

Corigeen, or Irish Pearl Moss.—This valuable moss, commonly known by the above names, has long been highly esteemed by the peasants on the western coast of Ireland as a dietetic remedy for various diseases; more especially for consumption, dysentery, rickets, scrofula, and affections of the kidneys and bladder. Dissolved by being boiled in water, it forms a thick jelly, more pure and agreeable than that produced from many other vegetables, and the jelly made from it is found to agree better with the stomach than any prepared from animal substances. A decoction of the moss, made by boiling half an ounce in a pint and a half of water, or milk, until reduced to a pint, is recommended as food for children affected with scrofulous or ricketty diseases, for such as are delicate and weakly, and for infants brought up by hand, or after weaning. As an article of diet for invalids generally, it is equal if not superior to arrow root, sago, and tapioca, being highly nutritious, bland, and easy of digestion.

The Corigeen appears to possess qualities similar to the Iceland moss, but without its unpleasant flavour, and the quantity of nutritious jelly it produces, is truly surprising. The prevalence of consumptive diseases in this moist climate, which often arises from neglected colds, renders this simple restorative of peculiar interest; it is, therefore, necessary to take some healing antidote, and

the Corigeen appears to be a valuable auxiliary.

Directions for using the Moss medicinally.—Steep a quarter of an ounce of this moss in cold water for a few minutes, then withdraw it (shaking the water out of each sprig) and boil it in a quart of new or unskimmed milk until it attains the consistence of warm jelly—strain and sweeten it to the taste with white sugar or honey, or, if convenient, with candied Eryngo root; should milk disagree with the stomach, the same proportion of water may be used instead. The decoction made with milk is recommended for breakfast to consumptive patients; and that with water will be found a most agreeable kind of nourishment, taken at intervals during the day, the flavour being varied with lemon juice or peel, Seville orange juice, cinnamon, or wine of any sort most congenial to the palate.

The Decoction in water is also taken for the relief of cough, at any time in the course of the day, when it is troublesome; and it is, for this purpose, simply sweetened with honey.

In dysentery, the decoction, either in milk or water, may be administered with equal advantage, and in addition to the sweetening matter (if a tea-spoonfull of the tincture of rhatany be mixed with each cupful, a tone will thereby be given to the intestines, at the same time that nourishment will be conveyed to the system, and irritation prevented: a large tea-cupful of the decoction may be taken three or four times a day.

As a pleasant strengthening food, boiled with milk, and strained, with the addition of a little sugar, it is unrivalled for infants. Delicate persons take it in this way for breakfast and supper with the happiest effects.

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INTELLIGENCE,

Medical, Surgical and Scientific.

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Military Orphan Fund, Bengal.—The members of the Bengal Medical Board, and Superintending Surgeons, who have had the rank of Colonel and Lieutenant-Colonel, assigned by the Honourable Court of Directors without however, any attendant advantage being granted to them in regard to furlough, retiring pension, or claims to prize-money, have lately been called upon by the general management of the Military Orphan Fund to pay an increased rate of subscription to the fund, in proportion to their advanced rank. The members of the Medical Board and Superintendant Surgeons considering this demand upon them both as frivolous and vexatious, memorialized government upon the subject, in answer to which memorial, government have decided that the general management are correct in calling for such additional charge, and have

sanctioned the deduction from the members of the Medical Board and Superintendent Surgeons of the rates of subscription laid down in the Military Orphan Fund regulations, for the corresponding ranks of Colonel and Lieutenant-Colonel.

Medals of the Royal Society.—In order to perform our part in giving publicity to the determinations of the council of the Royal Society, with respect to the Royal Medals, we extract the following notice from the second part of the Philosophical Transactions for 1834, which has just appeared—

“His Majesty King William the Fourth, in restoring the foundation of the Royal Medals, graciously commanded a letter, of which the following is an extract, to be addressed to the Royal Society, through his Royal Highness the Duke of Sussex, K.G., President.

“Windsor Castle, March 25th, 1833.

“It is his Majesty's wish, First, that the two Gold Medals, value of Fifty Guineas, shall henceforth be awarded on the day of the anniversary meeting of the Royal Society, on each ensuing year, for the most important discoveries in any one principal subject or branch of knowledge.

“Secondly, that the subject matter of inquiry shall be previously settled, and propounded by the Council of the Royal Society, three years preceding the day of such award.

“Thirdly, that literary men of all nations shall be invited to afford the aid of their talents and research; and

“Fourthly, that for the ensuing three successive years, the said two medals shall be awarded to such important discoveries or series of investigations, as shall be sufficiently established or completed to the satisfaction of the Council, within the last five years of the day of award, for the years 1834 and 1835, including the present year, and for which the author shall not have previously received an honorary reward.”

(Signed) “H. TAYLOR”.

The Council propose to give one of the Royal Medals in the year 1836, to the most important unpublished paper on Astronomy, communicated to the Royal Society for insertion, in their Transactions, after the present date, and prior to the month of June in the year 1836.

The Council also propose to give one of the Royal Medals in the year 1836, to the most important unpublished paper on Animal Physiology, communicated to the Royal Society for insertion in their Transactions, as above.

The Council also propose to give one of the Royal Medals in the year 1837, to the most important unpublished paper on Physics, communicated to the Royal Society for insertion in their Transactions, after the present date, and prior to the month of June 1837.

The Council also propose to give one of the Royal Medals in the year 1837, to the author of the best paper to be entitled Contributions towards a system of Geological Chronology, founded on an examination of fossil remains, and their attendant phenomena, such paper to be communicated to the Royal Society for insertion in their Transactions after the present date, and prior to the month of June in the year 1837.

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M. Dupuytren's Will.—The amount of legacies which M. Dupuytren intends to make is said to be equal to 500,000 francs. M. Dupuytren's health, although not recovered, causes no fear of a speedy realization of the dispositions of this remarkable will. It is understood that a new chair will be founded in the Ecole de Medecine. It is also probable that one item will be for the erection of a public fountain; nothing more is known of it.

[This is a very fair specimen of coolness; such comments must be exceedingly pleasant to the dying man.]

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Cholera at Marseilles.—According to a learned physician of Marseilles, the cholera still continues there in isolated cases. The number of sick has never exceeded five and of deaths three per diem. The disease has passed from the better to the poorer classes. From the 11th December to the 7th January there were 43 cases and 27 deaths. The first 16 patients all died; the seventeenth, the wife of a physician, after being for several hours in the blue stage with extinguished pulse and icy coldness of the surface, was saved by friction of six ounces of strong mercurial ointment—a treatment which, combined with opium and ice internally, the reporter strongly recommends. It causes no salivation.

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Poisoning by Sausages.—It appears that cases of poisoning by bad sausages and puddings are pretty frequent in certain districts of Wertemberg, in the neighbourhood of the Black Forest. In the Heidelberg Chemical Annals there is a great number of such cases related by Dr. Bodenmüller, who observed them in the winter and spring of 1834. The symptoms were most alarming, and several individuals died; the pudding they had eaten was chiefly composed of liver, and had become sour. The sausages that had caused poisoning were clotted and reduced to a kind of pap in the centre, were exceedingly bitter and rancid in taste, and cheesy in smell. Vomiting should be immediately induced, or if already effected, a purgative draughts of glauber salt, and clysters of vinegar and soap should be had recourse to.

[It is wonderful that no such cases occur in London: the sausages from the Continent remain exposed to influences, and for a time

quite sufficient, we should imagine, to induce the changes in them which render them poisonous.]

Effects of the Atmosphere at great Altitude.

On 16th December, 1831, M. Boussingault mounted the Chimborazo as high as 6,006 metres—the greatest elevation yet attained on land. In his memoir on this subject, M. B. gives it as his opinion, that it is possible for men to become accustomed to rarefied air. At an elevation nearly equal to that attained by De Saussure on Mont-Blanc, when he had scarcely strength to employ his instruments, young women in America pass whole nights in dancing. A celebrated battle in the war of independence, the battle of Pinchincha, was fought at a height very little below that of Mount Rosa. M. de Saussure's guides assured him that they had seen the stars at noonday; but M. Boussingault, who went much higher in America, than Saussure could have reached in the Alps, did not witness this fact.—*Archives Generales.*

Song of the Blackbird.—M. Ducan states that in traversing the foot of the Apennines from Novi to Genoa and from Genoa to Carrara, he was surprised to find the song of the blackbird of those mountains different from that in France, and exceedingly melodious, though the species is the same. Perhaps this is more particularly the case during the pairing season. It has been repeatedly remarked that in Italy some birds sing better than elsewhere. Humboldt ascertained this to be the case with regard to the canary-bird and chaffinch.

The Italian Voices.—The inhabitants of the city of Bergamo, are celebrated throughout Italy for the melody of their voices. But they are also famous for the number of goitres to be found among them. Is it probable that the same circumstances which produce the melodious voice, also cause the morbid growth of the throat? It is possible, for the same coincidence was observed at Zama in Numidia, by Pliny and Vitruvius.

Nitrate of silver to the Nipples.—M. Berard, Jeune, has addressed a letter to the *Gazette Medicale*, denying the originality claimed respectively by Dr. Hannay, Dr. Bowen, and Dr. Jewel, in the employment of this remedy in the above case. M. Berard says it was so employed and mentioned by M. Beclard, more than ten years ago.

Illness in high life.—The Prince of Orange is at present suffering under a most severe attack of pleurisy. The Princess Lieven has been recommended by her physicians to leave Russia for a warmer climate, in con-

sequence of an inflammatory affection of the chest; and the Princess Esterhazy is slowly declining in health, under a scirrhous affection of the uterus.

Russian Apothecaries.—The number of apothecaries at present practising in Russia amounts only to 487—a fact which strongly proves the crushing influence used against all liberal professions by a despotic and tyrannical government.

APOTHECARIES' HALL.

Names of gentlemen to whom the Court of Examiners granted certificates of qualification on Thursday, January 23rd.—Joseph Hickson, Haslam, Market Drayton; Webster Adams, Needham Market; Thomas Tattersall Roscow, Haslingden, Lancashire; William Taylor Tyson, Canterbury; Walter Monkhouse, Penrith; Thomas Theodore Campbell, London; Henry Offrell Snowden, Ramsgate; William Archer, Sudbury, Suffolk; Francis Carbott Fairbank, Sheffield.

NEW BOOKS.

BRITISH AND FOREIGN.

A practical Compendium of Diseases of the Skin by Dr. J. Green.

Chemical Attraction, an Essay, in five chapters, by G. L. Hume.

Malgaigne, Manuel de Medicine Operatione fondée sur l'Anatomie Normale et l'Anatomie Pathologique.

Merat et De Lens, Dictionnaire Universel de Matiere Medicale et de Therapeutique.

Velpeau, De l'Operation du Trépan dans les plaies du Tête.

Rosion, Medecine Pratique Populaire—Secours à donner aux Empoisonnés, et aux Asphyxiés, et nouveau Traité d'Embryologie Sacrée.

Louis, Examen de l'Examen de M. Broussais, relativement à la Phthisie et à l'action Typhoïde.

This last work has just been translated by Mr. Charles Cowan, and will shortly be published.

An Exposition of the Nature, Treatment, and Prevention of continued Fever. By Henry M'Cormac, M.D., 8vo. pp. 202. London, 1835. Longman, Rees, Orme, Brown, Green and Longman.

[An exceedingly learned treatise on fever, including vast research, great observation of the disease, and a summary of ancient and modern opinions.]

The practice in the Liverpool Ophthalmic Infirmary, for the year 1834, being the first special report. By Hugh, surgeon to the charity, 8vo. pp. 55. A Plate, London, 1835. Longman and Co.; Liverpool, Grapel.

[A very good report of a Provincial Institution, which proves the author to be well acquainted with the diseases of the eye, with the best works on the subject.]

Tables and Diagrams of Chemistry and Pharmacy. By John Murray, M. D.

The Philosophy of Health. By Dr. Southwood Smith, Author of "A Treatise on Fever."

Observations on the Causes and Treatment of Ulcerous Diseases of the Leg. By J. C. Spender, Member of the Royal College of Surgeons in London. 8vo., pp. 210. London, 1835. Longman and Co.

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CORRESPONDENTS.

A Portsmouth Subscriber.—We really know nothing of the two young gentlemen who lately ran away from Portsmouth, and attempted to bribe the guard of the Rocket, night coach, to bring them free up to London in the hind boot of the coach—they were a commission! from that renowned spot, St. Thomas's Hospital.

A Friend.—Drs. Graves and Stokes were the aggressors; and if they chose to attack us, they must be satisfied with our defence. There is a Jerry Sneak who has sadly imposed on both, to serve his own purposes; and nothing but a respect for the profession has hitherto restrained us from publishing their letters to us, which, unless further provoked, we shall not suspend at our publishers, after their own fashion at the office of the Portsmouth Cholera Gazette.—Two of these worthies most strenuously advised us and our Dublin friends to dissociate ourselves from the men they now patronize, be-

cause they —; but no—we shall not state the reason at present.

An Observer.—It is all the work of the penny-a-line men, who cater tomfoolery for the newspapers. The editors have nothing to do with it; they are too well informed to admit such ungrammatical trash. There must be something to fill up—the murder of a child, or suffocation of an old woman—anything.

A General Practitioner.—It was an awkward mistake to order a woman to be tapped to-morrow, after two months sojourn in an hospital; and on the morrow, that she should be found in labour and delivered. Simon Pure of the hospital must have been in extacy on going to remonstrate on the pettit treason committed by his patient on leaving the hospital, the only source of superior medical and chirurgical knowledge, until she was tapped, more especially when her mother exclaimed, "Why, she has got rid of her dropsy, and she has had a son this morning."—Well might the Fellow exclaim, "The d—l", and then run out of the house. The pure surgeons are not a whit less fallible. We could cite numerous cases, which have fallen under our own observation, in which have blundered as remarkably.

A Lover of Professional Etiquette.—It shews a narrow intellect, a bad feeling, and a certainty of failure.

Sheffield School of Medicine.—We regret to observe, by a Sheffield paper, that a brutish mob pulled down the School of Medicine at Sheffield, having first burned all books and papers they could find.—What barbarians!

WEEKLY METEOROLOGICAL JOURNAL.

Jan. 1835.	Moon.	Thermom.			Barometer.		De Luc's Hygrometer		Winds.		Atmospheric Variations.		
Jan.													
22		37	23	36	29.91	30.05	87	86	N.W.	N.W.	Cloudy	Fine	Fine
23		40	46	41	30.08	30.02	85	82	S.W.	S.S.W.	—	Cloudy	—
24		45	51	40	29.85	29.99	80	80	S.W.	W.S.W.	—	—	Cloudy
25		50	50	46	29.94	30.00	79	80	W.S.W.	W.S.W.	—	—	—
26		49	51	43	30.06	30.14	83	80	S.W.	S.W.	Fine	Fine	Fine
27		45	51	40	30.17	30.17	78	86	W.S.W.	S.W.	Cloudy	—	—
28	☾	42	44	41	30.14	30.12	83	80	S.S.W.	S.W.	Fine	—	—

50, High Holborn.

WILLIAM HARRIS and Co.

All communications and books for review are to be addressed (post paid) to Dr. Ryan, 4, Great Queen-street, St. James's Park, Westminster; or to G. Henderson, 2, Old Bailey, Ludgate-hill.

Advertisements should be forwarded before the afternoon of Thursday; all books for review on Wednesday; and all communications on Monday, if intended to appear in the ensuing number.

THE

London Medical and Surgical Journal.

No. 158.

SATURDAY, FEBRUARY 7, 1835.

VOL. VII.

LECTURES

ON

MEDICAL JURISPRUDENCE,

DELIVERED BY PROFESSOR A. T. THOMSON,

F. L. S.,

At the University of London; Session 1834-35.

LECTURE XVI.

Infanticide.

GENTLEMEN—We have now to inquire into the means by which the death of a new-born child may be caused.

I have already stated that infanticide may be traced either to *omission* or to *commission*; let us examine each, and the influence which it possesses in a medico-legal point of view, in fixing the crime of infanticide either upon the mother or any other suspected party.

If a woman be delivered at the full period, and the child be born without any assistance, and be found dead; if it appear that no preparations have been made for delivery; that no baby linen have been provided;—this is presumptive evidence of a previous intention to destroy the child, on the part of the mother: and yet this neglect may have proceeded altogether from ignorance; from an unconsciousness of the existence of pregnancy until it was fairly established; consequently, we may infer a difficulty in determining the probable period of delivery. Few women, however, obtain the age of puberty in this state of ignorance; and, unless great pains have been taken to conceal their state—which also implies an intention to destroy the infant—it is evident that the most inexperienced would receive advice on this subject, as soon as their situation becomes obvious, from the more experienced; and, therefore, ignorance can rarely be admitted as a plea in this case.

The death of a new-born infant may also be caused by omitting to remove it from that state of supination in which it generally lies when expelled from the vagina of the mother. It is easy to conceive a case of this description, in which a young woman

with her first child, and that an illegitimate one, may have been unexpectedly taken in labour, and, after the birth of the child, be unable to remove it, or be ignorant of the danger of permitting it to remain in the supine state until assistance be procured. The female, in such a case, may be accused of child-murder, and yet be perfectly innocent. Dr. Wm. Hunter, in his treatise on the uncertainty of the signs of murder in the case of bastard children, lays particular stress on cases of this kind; and illustrates the fact which he wishes to establish by the following case.—“A lady, at a pretty distant quarter of the town, was taken with labour pains in the night time. Her nurse, who slept in the house, and her servants were called up, and I was sent for. Her labour proved hasty, and the child was born before my arrival. The child cried instantly, and she felt it moving strongly. Expecting every moment to see me come into her bedchamber, and being afraid that the child might be some way injured, if an unskilful person should take upon her the office of a midwife on the occasion, she would not permit the nurse to touch the child, but kept herself in a very fatiguing posture, that the child might not be pressed upon or smothered. I found it lying on its face, in a pool which was made by the discharges, and so completely dead, that all my endeavours to rouse it to life proved vain.” If, in such a case, the mother be alone, every circumstance that can prove favourable to her should be inquired into by the medical witness; as the maternal instinct operates so strongly in favour of the preservation of the child, that we must imagine some strong reason for the non-operation of this, unless facts prove the contrary, before we can admit that the child has been wilfully murdered. Thus, it is possible that syncope may have taken place, or convulsions may have supervened the expulsion of the child, to prevent a mother from affording the necessary aid to her offspring. It is our duty to investigate these, and also to ascertain whether there may not have existed other circumstances which may have operated in producing death in such a case, be

fore we can concur in the crimination of a mother. A case illustrative of this fact is detailed in Burnett's *Treatise on the Criminal Law of Scotland*.

If the proper temperature of the body of an infant be not maintained after birth, or, if the child be starved, in both cases the murder of the infant may be regarded as an act of omission, but in general it is an act of commission; yet I have known cases of the most flagrant description connected with starvation.

In cases of this kind the age of the fœtus at birth should be ascertained; for if a child be born at the seventh month, or earlier, the utmost care may be taken to preserve it without proving successful. It is, however, not certainly ascertained how long a child can live after birth without nourishment. Foderè supposes that it is dangerous to extend the time beyond twenty-four hours; but many instances have occurred that life may be sustained immediately after birth for two and even three days; but much must depend on the state of the child at birth: whether it be delicate and of a spare habit of body, or vigorous and plump. If, on an examination of the alimentary canal, it be found completely empty, if the gall bladder be enlarged, and much bile be effused into the stomach and intestines, and at the same time the whole body be emaciated, and if the umbilical cord be also detached—a circumstance which rarely occurs until the fourth day—there can be one opinion only as to the cause of its death—culpable omission to administer nutriment.

Another frequent cause of the death of infants, arising chiefly from ignorance, is omitting to tie the umbilical cord. Although the danger of leaving this cord untied has been generally admitted from the earliest period down to the present time, yet some obstetricians have gravely contended that it is not essential for the preservation of the child; such is the opinion of Fontani, Alberti, Kaltamidt, and some other writers. It is not wonderful that a mother who has given birth to a child without assistance should neglect to put a ligature on the infantine portion of the cord, whether she cut or tear this asunder; but if this arise from ignorance, it can scarcely be brought forward as a proof of infanticide. A clever counsel may raise several questions upon this point, which it is proper you should be prepared to meet. Thus, it may be asked, Whether, in the event of the cord not being tied at all, and not divided until after the expulsion of the placenta, when all pulsation in the cord has ceased, and yet the child has been found dead—upon what signs would you be justified in referring the death of the child, in this case, to the navel cord not being tied? Now, as death from hæmorrhage of the umbilical cord must necessarily cause an empty state of the heart and blood vessels, it is evident that such a state of the circulating

organs will fully justify your opinion: on the contrary, if the infant have been murdered, and the mother set up a plea of hæmorrhage from the navel cord, arising from ignorance on her part, unless we find a deficiency of blood in the large vessels, especially the veins, and in the cavities of the heart, we cannot attribute the death of the infant to this cause. Nor is the evidence of hæmorrhage in this case strengthened by the presence of a large quantity of blood about the place where the child is found, or in the linen in which it may be rolled, for this may be put there by an artful woman to skreen her iniquity; and, under no circumstances can we admit that hæmorrhage has taken place, unless the large vessels and the cavities of the heart be empty. But a child may be destroyed by an hæmorrhage from the umbilical cord, and the cord be afterwards tied. In this case, the same examination, and an empty state of the heart and large blood-vessels, will unmask the deception.

Such are the principal causes of infanticide, by omission; we have now to notice the manner in which death occurs when it is the result of wilful violence; or, in testimonial language, of *Infanticide by commission*.

When a child has been found dead, and it has been determined that respiration had taken place, and, from other evidence, there is every reason to imagine that a murder has been committed, our first duty is to examine carefully every part of the body, and to determine, from the signs which this presents, the causes of death. I have already noticed the fallacies which may be fallen into regarding bruises; the appearance of ecchymoses, the bruised state of the fleshy parts of the body, and a tumour of the sinciput, may be referred to a severe and difficult labour; but when there is extensive contusion, with fracture of bones, and effusion of blood within the cranium, there can only be one opinion—that these signs must have resulted from violence. I have also stated to you, that child-murder has occasionally been perpetrated by thrusting sharp bodies into the brain, through the fontanelles. In the *causes celebres*, several instances of this kind are stated to have been perpetrated by a mad woman, who killed every new born infant that she came near, in order, as she affirmed, to people heaven with those devoid of acquired sin. She plunged the instrument which she employed into the nostrils, the ears, the temples, the fontanelles; she also pierced the thorax with a sharp needle, so as to lacerate the heart; and in one or two instances the spinal marrow was injured by the instrument being pushed in between two of the cervical or the dorsal vertebræ; or the abdominal viscera may be wounded by the introduction of a sharp pointed instrument into the rectum; thence the necessity of

examining closely every ecchymosis. But in doing this, too much caution cannot be exercised in distinguishing these ecchymoses from accidents which may occur during dissection.

Among other mechanical injuries inflicted in the process of delivery, we must not overlook the fracture, or rather luxation of the cervical vertebræ, which may be produced by forcibly twisting the head of the infant, and thus injuring the spinal marrow. When death results from such a cause, we must look for blood effused among the cervical muscles; and, not unfrequently, there is fracture of the first and second vertebræ; and the ligaments are either much stretched or forcibly ruptured. It may, however, be suggested, that such a state can be produced by violently twisting the head of a still-born child, by any designing individual, who may have a spite against the mother, and desire to bring her life into jeopardy. But such an opinion is easily refuted; for although luxation and fracture of the vertebræ can be caused by twisting the neck violently, after death, yet, in this case, the effusions and ecchymosis of which I have spoken, will not be present.

If the death have been the effect of strangulation, besides the livid mark of a cord round the neck, the face will be found livid, the tongue swollen and protruded, and the mouth frothy. The signs of this state, however, are best discovered by dissection of the contents of the cranium, and those of the thorax: the vessels of the pia mater, and the jugular veins, are generally found gorged with blood, and the lungs covered with ecchymoid spots. A barrister may put the question, in this case, Whether appearance of strangulation may not arise from the accidental twisting of the umbilical cord round the neck of the infant? It cannot be denied that the umbilical cord is frequently twisted round the neck of the infant; and, when it is unusually short, a mark may be left round the neck, closely resembling that left by strangulation after birth: but the case is easily determined by a post mortem examination of the thorax. If the death of the child have arisen from actual strangulation, then the lungs will be found in a dilated state; the pulmonary vessels tinged with blood; and the whole capable of floating in water; whereas, if the mark around the neck have been produced by the umbilical cord, the lungs will be found in the state of those of a still-born child. In giving an opinion, however, in such a case, we must bear in mind that the child may breathe when the head only is protruded from the vagina, and the cord may not be drawn tight until after this have taken place; so that with the signs of strangulation there may be those of perfect respiration, and yet no criminality attach to the mother. The presumption of violence may be great, yet it is only conjec-

tural; and, whenever the evidence falls short of positive proof, the benefit must be given to the woman. Indeed it should be regarded as an axiom, that in all cases in which the sensible evidence of wilful criminal violence is not perfectly demonstrative, no woman ought to be convicted of perpetrating infanticide. The natural instinctive feeling of maternal affection, which leads every mother to guard the life of her offspring, even when this is likely to heap disgrace upon her character, should always influence us in judging of appearances which lead to the supposition that violence may have been employed; for if the evidence be not perfectly decisive of criminal violence, we ought never to presume its existence, in the face of so powerful a principle as maternal affection.

When infanticide really occurs, drowning is not unfrequently the mode of causing the death of the infant. In this case, if the child were merely thrown into the water, the same struggling, the same buoyancy, and the same symptoms which, as I shall soon describe to you, occur in the adult who is drowning, take place in the infant; but, in general, the child is held down in the water until life be extinct, which seldom requires more than two or three minutes: suffocation occurs, and the surface of the body, although sometimes pale, yet is commonly of a purplish hue. Post mortem examination of the body displays the right side of the heart, and the large vessels connected with it, gorged with blood, while the left is often nearly empty; the pulmonary artery is tinged with black blood, and the bronchial tubes contain a certain quantity of frothy, aqueous fluid. This might lead us to suppose that the diaphragm would rise into the thoracic cavity, but the contrary is the case; the diaphragm is depressed into the abdomen; and this constitutes one of the most marked distinctions between drowning whilst alive, and mere submersion in water after death. In drowning, no expiratory act occurs, but from the sense of suffocation which is present, the efforts of inspiration are great, and tend to keep down the epiglottis until all consciousness is over; then a few bubbles of air rise to the surface; but although emptying of the lungs takes place to a certain extent, yet the depressed state of the diaphragm, which had previously taken place, remains. Another marked diagnostic sign is taken from the state of the blood, which is permanently fluid in a person who has been drowned, but is in a coagulable state if the person have died before being submersed in the water in which the body is found. The brain of those who are drowned presents a dull red hue on the surface, but the vessels are not so much gorged as in death from strangulation, neither is there any extravasation of blood, there being no obstruction to the return of the blood: in case of drowning; the suffocation arises

solely from the want of the oxidizement of the circulating fluid. Many of the signs of drowning, however, are similar to those arising from other causes; and therefore, you should be prepared to meet every difficulty which may be advanced by counsel, and be able to state those signs which are the most conclusive in deciding that drowning has been the cause of death in an infant found in water: one of these is the protrusion of the diaphragm into the abdomen; and another, provided the former be present, is the fluidity of the blood. With respect to the last, I say it can be admitted only if the former be present, because the blood also remains fluid in cases of death from the influence of some narcotic poisons, and of unrespirable gases, in which the infant may be immersed. It is necessary, however, to remark, that putrefaction renders these signs fallacious.

It now only remains to notice the method of examining the body in case of supposed infanticide. The object in this examination is chiefly to ascertain whether or not respiration had been effected; whether the child had breathed after it was completely born; whether it had died from strangulation, drowning, suffocation from unrespirable gases, or other means; or from blows or wounds. With these in view, the examination and dissection is to be thus conducted:—After careful external examination, noting down every unusual appearance, particularly whether putrefaction have taken place, and to what extent it has proceeded, so as to determine the probable period of the death of the child, and how this can be reconciled with the period of the supposed murder; whether the death have occurred in utero or after birth; if after birth, whether the state of the body can throw any light upon the manner or the cause of death. Having made and noted such appearance, we are next to proceed to open the body, and in so doing, we must examine first the cavities in rotation, beginning with the mouth. The first step of the dissection should be an incision, beginning at the lower lip and terminating at the sternum, and a transverse incision along the lower edge of the lower jaw, which, after the integuments are dissected back, is to be divided at its symphysis, the two portions separated, and the head bent back, so as to obtain a complete view of the interior of the mouth and fauces. The position of the tongue, in particular, must be examined and noted, and whether any foreign matter be found in the mouth. We must next lay open the trachea through its whole length, beginning at the larynx; if more fluid than natural be found in it this must be noted, both as regards quantity and its nature, whether frothy or otherwise: we must also note whether the bronchi be loaded with tenacious mucus, and if blood be mixed with it; as any of these circumstances will afford strong presumptive

grounds for suspecting that either drowning or some other means of suffocation have been the causes of death. At the same time new-born children are subject to epileptic fits, which cause much frothy mucus to be present in the mouth, but this rarely or never extends to the trachea. The frothy mucus in the trachea indicates little if putrefaction have taken place; thence the great importance of carefully noting the appearance and state of the body previous to dissection. The contents of the pharynx must also be noticed, and the excised part put into pure distilled water, in order to extract afterwards by boiling, any matter capable of being tested. The cavity of the thorax is next to be examined; and to expose this the scissors are to be used in preference to the scalpel in dividing the cartilages of the ribs, so as to remove the sternum, after the integuments have been divided and dissected back. The state of the lungs is now to be noted, particularly whether they fill the cavity of the chest or are compressed; and whether the diaphragm be pushed up or descend into the abdomen. The trachea is to be divided as near as possible to the lungs; the large vessels, both aorta and vena cava, are to be tied with two ligatures, and cut between these, so that the lungs may be removed from the body and weighed. The state of the cavities of the heart, whether the foramen ovale be open, or the ductus arteriosus contains blood, are next to be examined, and particular attention is to be paid to the state of the pulmonary artery.

Proceeding from the thorax to the abdomen, this must be laid open by the usual incisions, so as to form a triangular flap, at the lower part, which may be turned down, to permit the umbilical vessels to be examined. If these vessels and the sinus of the vena portæ be found completely exsanguine, suspicions of hæmorrhage having been the cause of death will be greatly strengthened. Every discolouration of the abdominal viscera must be accurately noted down, with the appearance of the liver, and the ductus venosus, previous to the opening any of the viscera. After tying all the vessels connected with the liver, this should be removed. The stomach must next be opened and the œsophagus should be slit up and examined. Should the stomach contain much water, although this be not an essential consequence of drowning, yet it strengthens the suspicion of that event. Little satisfaction can be obtained from examining the intestinal canal, unless we suspect that poison has been administered: but the empty or full state of the urinary bladder should be carefully noted.

The examination of the head requires every attention; and young anatomists and practitioners, frequently defeat the object of their investigations from want of delicacy in managing this part of the dissection.

After having ascertained that it displays

no bruises but what may have occurred in a severe labour; that no ecchymosed spots proceed from punctures, and that the bones are free from fractures and depressions, we are to make a longitudinal incision through the integuments, beginning at the lower part of the forehead and terminating at the second or third cervical vertebra; and then a transverse incision, at right angles to the other, from ear to ear; so that by dissecting back the integuments the whole of the cranium may be exposed. The bones are next to be carefully removed by the aid of the scissors and the handle of the scalpel, having previously noted the appearances on the interior of the scalp; and the utmost care must be taken to prevent laceration in this part of the dissection. The anatomist must now examine the state of the dura mater, whether it be red or inflamed; and if so, whether these spots of redness correspond with bruises on the surface of the integuments; as a strong proof of criminal violence may be drawn from such a correspondence. He must also carefully notice whether any bloody serum be effused under the dura mater. A deep red and inflamed appearance of the cortical substance of the brain,

also, with ecchymosis of the scalp, is a strong proof against the accused. The last step of the examination is to ascertain the state of the spinal column and its contents; and this is best effected by the use of the circular saw and a pair of sharp bone nippers, by the aid of which the spinous portions of all the vertebræ may be readily removed, and the whole medullary column laid bare. In making this examination, it is necessary to put down every thing on paper; and to trust nothing to memory; and, whilst we feel a just abhorrence for a crime which pre-supposes the obliteration of the best feelings of our nature, and which, if slightly punished when confirmed, would lead to the most awful consequences, we must always bear in mind the state of mind of a young female reduced to the temptation of committing such a crime as infanticide, for the sake of character; must bear in recollection that this state has probably been the result of the arts of a base seducer; and although we cannot palliate the crime, yet that we should be slow to condemn; and certainly never, without the clearest demonstration of guilt, place either the character or the life of a woman in jeopardy.

LECTURES ON THE INSTITUTIONS OF MEDICINE,

DELIVERED BY JOHN FLETCHER, M.D., F.R.C.S.E., AT THE ARGYLE SQUARE SCHOOL OF MEDICINE, EDINBURGH; SESSION 1834-35.

LECTURE IX.

Continuation of the Tissues—The Fluids.

As a proper Nervous, so a proper Muscular Tissue does not, in all probability, occur in any plants, and many of the lowest tribes of animals are likewise destitute of it. This appears to be the case with all the Zoophytes; and indeed in any of the invertebrate tribes of animals this tissue is not easily recognizable from the cellular—so difficultly, that by some authors (a) a proper Muscular Tissue has been denied to them all. On the other hand, the number of distinct organs performing the office of muscles, and therefore to be looked upon as composed of a colourless and jelly like muscular tissue proper to these animals, is in some invertebrate animals almost incalculable (b). And in the lower orders of even the vertebrate animals, the muscular tissue presents a very different aspect from what it has in the higher; being, in most fishes, white, flaky, and without tendons, and in reptiles in general, although of a deeper colour and more rounded, still without tendons, and very dissimilar in its general characters from that of birds and mammals. In the latter, and particularly in man, it is more or less distinctly divisible, like the Nervous Tissue, into two varieties, the one unconnected with the skeleton, and generally in contact with mucous membranes, as in the air-passages, the gullet, stomach, and intestinal canal, the ducts of all the proper conglomerate glands of the body, the gall-bladder, urinary bladder, and urethra, and Fallopian tubes, the vesiculæ seminales, and the muscles moving the small bones of the ears—the only exception to the latter condition being in the heart, the

(a) Oken.

(b) Lyonnet, many years ago, enumerated upwards of four thousand muscles in the caterpillar, many of which he described and

delineated; and similar descriptions and delineations of the muscular apparatus of other invertebrate animals have been given lately by Straus, Newport, and others.

parenchymatous tissue, and the irides—the other attached, directly or indirectly, to the skeleton, whether connected or otherwise with the mucous membranes, as in the muscles which dilate and contract the chest, those by which the voice and speech are affected, those by which the aliments are taken, and the voiding of the stools and urine assisted, those by which the organs of the senses are directed to their proper objects, and those, lastly, by which the various positions and motions of the head, trunk, and extremities are regulated. Of these, the former, then, may be called the Internal Muscular Tissue, as appertaining chiefly to the contained, the latter the external, as appertaining chiefly to the containing parts of the body (*a*). Both are characterized by a red colour, opacity, a spongy inelastic consistence, and a fibrous structure, and both have their fibres connected together by a fibrous membrane, which, becoming condensed on the surface, or at the extremity of a muscle, constitutes, where these are met with, its tendon, fasciæ, aponeuroses, &c. The chief distinctions, in the meantime, between the two varieties of the muscular tissue are that

In the Internal Muscular Tissue,

The colour, with few exceptions, is faint;

The consistence is comparatively firm;

The apparent fibres are small, and rather interwoven together, than placed parallel with each other;

The fibrous membrane connecting these is seldom condensed into a tendon;

The blood-vessels and nerves are comparatively numerous, but small.

The primitive muscular fibre has been successively represented as composed of strings of vesicles (*b*)—quite distinct from the solid globules already alluded to—as tubular (*c*), as solid, and cylindrical (*d*), and as flattened or prismatic (*e*), and its diameter, while it is by some writers stated to be seven times greater than that of the red globules of the blood (*f*), is by others described as not exceeding one third (*g*), one fifth (*h*), or even one eighth (*i*) of their diameter. We must remember further that the size of these red globules themselves is by no means established. The primitive muscular fibre is in general said to be somewhat tortuous in its course, perhaps, as in the case of the nervous fibre, to compensate for its want of elasticity; by some physiologists, however, it is represented, on the contrary, as quite straight (*k*). The collective muscular tissue of the human body, constituting, as it does, not fewer perhaps than between four and five hundred muscles attached to the skeleton alone, and—if we admit its co-existence with the parenchymatous tissue—entering, as it must do, into every other organized tissue, is to be regarded as by far the most abundant of all, and as constituting a very great proportion of the weight, and a still greater proportion of the bulk of the whole body, although it is impossible of course to estimate this proportion with any thing like precision.

Of the Unorganized Tissues, whether of plants or animals, it is unnecessary to speak in

In the External Muscular Tissue.

The colour is commonly deep;

The consistence is comparatively soft;

The apparent fibres are larger, and in general run parallel with each other;

The fibrous membrane connecting these commonly forms a tendon;

The blood-vessels and nerves are comparatively few, but large.

(*a*) The muscles were not enumerated by the ancients among their *σπολιμενῆ*, because they were considered to be a mere mixture of the Fibrous and Nervous Tissues; and even so lately as the time of Stenon, no difference was presumed to exist between a tendon and a muscle, except that, in the former, the fibres were “*arctæ*,” and, in the latter, “*laxæ inter se conjunctæ*.” (*De Musc. et Gland.* 1683). The muscular Tissue was regarded by Vieussens, Quesnay, Mascagni, and others, as directly composed of blood-vessels; and a vague hypothesis—which appears to have originated in the observation of the effects of certain stimulants applied to all appearance directly to the muscular fibre—that muscles were merely expansions of nerves, the two together constituting what was called the *Solidum Vivum* of the body, was for a long time prevalent in the schools of medicine. This hypothesis the second Dr. Monro thought it necessary, so lately as the year 1783, formally to refute (*On the Nervous System*); and certainly, if distinct anatomical, chemical, and

vital properties can entitle any tissue to be regarded *sui generis*, the muscular has a better right than most others to be so reputed. The division of this tissue into two varieties was proposed by Bichat, under the names, however, of Muscular Tissue of Organic, and Muscular Tissue of Animal life; for which the names Internal and External have been above substituted, for reasons already mentioned when on the subject of a similar division of the nervous tissue.

(*b*) Croone, 1664; Willis, 1674; Borelli, 1679; Cowper, 1710; Keill, 1717; Stuart, 1734; K. Boerhaave, 1754; D'Hamberger, 1757; Heister, 1758, &c.

(*c*) Baglivi, 1703; Bernouilli, 1710; Santorini, 1739; Senac, 1749, &c.

(*d*) H. Boerhaave, 1727; Fontana, 1781; Rudolphi, 1825, &c.

(*e*) Prochaska, 1778; Meckel, 1816, &c.

(*f*) Sprengel.

(*g*) Autenreith.

(*h*) Prochaska.

(*i*) Mays.

(*k*) H. M. Edwards.

this place, since they have all been alluded to incidentally, after each of those organized tissues with which they appear to be most immediately connected.

The other component parts of an organized being are its fluids. The following are the principal fluids.

OF PLANTS IN GENERAL.

The **CRUDE FLUIDS**, or those which ascend by the spiral vessels and their numerous modifications to the vesicles of the leaves, or corresponding organ; called collectively the *Sap*.

The **MATURE FLUID**, or that which descends by the entire vessels from the vesicles of the leaves or corresponding organ; namely, the *Cambium*.

That **SECRETED FROM THE SAP**, and deposited, in Plants which breathe by the vesicles of the leaves, in those vesicles, namely, *Carbonic Acid*.

Those **SECRETED FROM THE CAMBIUM**, all which appear to be deposited directly in proper utricles composed of Cellular Tissue, and consist of the *Oils*, fixed and volatile, the *Turpentine*s, the *Balsams*, the *Gum-resins*, &c., each of which containing two or more of the reputed proximate principles of vegetables, such as Stearin, Elain, Resin, Acid, Extractive, &c., while there are besides innumerable others, which, as consisting of only one such proximate principle, will fall to be enumerated elsewhere.

OF ANIMALS IN GENERAL.

The **CRUDE FLUIDS**, or those which are returned by the Veins and Lymphiferous or Chyliferous vessels to the lungs or corresponding organ; namely, *Venous Blood*, *Lymph*, and *Chyle*.

The **MATURE FLUID**, or that which proceeds by the arteries from the lungs or corresponding organ; namely, *Arterial Blood*.

Those **SECRETED FROM VENOUS BLOOD**, either mixed with *LYMPH* and *CHYLE*, or alone, and deposited, in Animals which breathe by lungs, in the air passages, namely, *Carbonic Acid*, or in the ducts of the liver, namely, *Hepatic Bile*.

Those **SECRETED FROM ARTERIAL BLOOD**, and deposited—

1st. Directly on expanded surfaces, when they are called *Perspired Secretions*, as the *Halitus from the Lungs*, the *Halitus of the Serous Sacs*, the *Gastric Fluid*, the *Menstrual Fluid*, the *Humours of the Eye*, the *Fluid of Cotugno*, the *Fat*, the *Sweat*, the *Marrow*, the *Sinovia* and the *Buccal Fluid*.

2nd. Directly in follicles, when they are called *Follicular Secretions*, as the *Mucilage*, the bitter portion of the *Cystic Bile*, the *Stools*, the thick portion of the *Semen*, the *Fluid of Meibom*, the *Cerumen*, and the *Sebaceous matter of the Surface*.

3rd. Directly in the ducts of glands, when they are called *Glandular Secretions*, as—besides those already mentioned as secreted from Venous Blood—the *Pancreatic Fluid*, the *Urine*, the *Milk*, the thin portion of the *Semen*, the *Tears*, and the *Saliva (a)*.

(a) To say nothing of the classification of the fluids of plants, the origin of the study of the fluids of animals, and particularly of man, preceded by many ages that of the study of the tissues, ancient as this was; but it is of no interest at present to know the crude speculations, upon this subject, of the ancient philosophers and physicians, any further than it furnishes us with a key to that system of pathology, which, under the name of the *Humoral Pathology*, maintained undisputed possession of the medical world for upwards of two thousand years, and the vestiges of which are still obvious in many of our most familiar phrases and allusions. It is sufficient at present to observe that they admitted only four primary or asserted fluids—to wit the blood, the mucilage or phlegm, the yellow bile, and a supposed black bile. Το δὲ σῶμα τοῦ ἀνθρώπου, says Hippocrates, ἔχει ἐν ἑαυτῷ Ἄιμα, καὶ Φλέγμα, καὶ Χολήν διττήν ἡγόν, Ζανθήν τε καὶ Μέλαιν. (*De Nat Hom.*) and it was from some loss of balance of these in certain parts of the body, and not, as is commonly believed, from any vitiation of them, that diseases in general

were supposed to arise. All the other fluids in the mean time, were looked upon as little more than accidental, and the purgings, as it were, of these four. Since however the subversion of these visionary notions, and the establishment of so many real and tangible fluids in the human body, the classification of them has become a matter of some importance. Accordingly, by Pitcairn and Michelot they have been arranged with reference to their mechanical properties, into thick and thin; by Haller, with reference to their preponderating proximate principles, into Aqueous, Mucilaginous, Oleaginous, Albuminous, Gelatinous, Fibrinous, and so forth: and by others, with reference to their supposed physiological properties, into living and dead. The classification followed above is founded on those of Blumenbach and Chaussier respectively—the former of whom speaks of the fluids in general as crude, mature and secreted, while the latter subdivides the last into perspired, follicular and glandular. It is hardly necessary to say however that, in a subject of this kind, every man is at liberty to follow whatever arrangement he consider

The *sap* of plants is of course confined to those tribes which have a proper vascular Tissue; and the same thing may be said of the *venous blood, lymph, and chyle* of animals. In the former case the great bulk of the fluids, at any time in the ascending vessels, is derived immediately from the soil. Plants having no circulation, properly so called—but, in the latter, the great bulk of the venous blood, lymph, and chyle, is derived immediately from the arterial blood, to which more or less has been added from the other parts of the body, solid and fluid, by means of absorption, so that all these fluids are sometimes considerably different, as taken from different vessels (*a*). And so rapid and incessant are these conversions, on the one hand, of arterial blood into the fluids under consideration, and, on the other, of these again into arterial blood, that none of them can be said to be for a sufficiently long time identical, while circulating in their vessels, to enable us to infer any thing respecting their properties under these circumstances, from those which they display when stagnant in a tea-cup (*b*). With respect to their physical properties, the following are the

	Of Venous Blood.	Of Lymph.	Of Chyle.
Colour,	Modena red;	Rose red;	White;
Aspect,	Semitransparent;	Transparent;	Opake;
Consistence,	Viscid;	Viscid;	Viscid & oleaginous
Specific gravity,	1051;	1025;	p

It appears, however, from recent investigations, that venous blood, while in the course of circulation, consists entirely of a colourless, transparent, viscid fluid, strictly sui generis, and called liquor sanguinis, in which float the red particles, and that it does not hitherto contain, in a state of permanence, any one of the proximate principles which it afterwards manifests; but that when drawn from its vessels this liquor sanguinis soon coagulates, and subsequently separates into what are called the serum and crassamentum, in the former of which become now fully developed the sodo-albumen, oil, extractive and salts, and in the latter the fibrin, while the red particles—which the latter has involved, as well as a large proportion of the serum also—contains the hematosin and the oxyd of iron (*c*). If this be the case, the rapid coagulation of the venous blood, when out of the course of circulation, or rather its non-coagulation while still circulating, is no longer a problem, since it is obviously to be ascribed to the perpetual molecular changes which, in the latter case, it is undergoing, and which are incompatible with the full development of that principle on which its coagulation depends (*d*). And the same thing may be said probably of lymph

calculated to inculcate the most useful associations—the only legitimate object, at any time, of classification, which is not the mistress of science, but her handmaid—*Egregia illius Ancilla, non alia peior domina*.

(*a*) It was the venous blood alone which the immediate followers of Thales and Pythagoras included among the four primary fluids lately alluded to; the existence of arterial blood not having been generally admitted till the time of Galen; the arteries—as indeed the name implies—having been previously represented as containing air only. The chyle has been known as a distinct fluid since the time of Aselli (1622), the discoverer, not indeed of the existence, but of the functions of the chyliferous vessels; and the lymph, since that of the two Hunters (1762), and their immediate disciples. Le Gallois and Flandrin principally have been instrumental in shewing that the venous blood is of a different character, as taken from different veins; and Reuss, Emmert, Vauquelin, Brande, and Marcet, in establishing the same fact, with respect to the lymph and chyle.

(*b*) A very rough estimate will be sufficient to demonstrate this. Thus, if the left heart of man send two ounces of blood into the arteries at each beat, and beat eighty times in a minute, it will renew every drop

of arterial blood, at any given time in the body—say six pounds, in little more than half a minute; and as these six pounds must pass, in this time, into the veins and lymphiferous or chyliferous vessels, it follows that every drop of these fluids at any given time in the body—say thirty-six pounds—must be renewed in about three minutes and a half. But every particle of arterial blood is decomposed in the parenchyma of the body, and every particle of venous blood, lymph, and chyle, is decomposed in the parenchyma of the lungs. The above, therefore, are the extreme periods of the retention, by any one of these fluids, of its identity.

(*c*) Dr. Babington (*Med. Chir. Trans.* 1831).

(*d*) The spontaneous changes which the blood undergoes when out of the course of circulation, and particularly its coagulation and separation, have been a favourite subject of investigation since the times of Harvey, Lower, Malpighi, and Borelli; by whom, and their successors, the last-mentioned changes have been ascribed in general either to the contact of the air, or to the loss, sometimes of heat, sometimes of motion, sometimes of vitality. But the blood coagulates and separates equally well in various gases, and even in vacuo, as in the atmosphere, equally well when agitated as when at rest; equally

and chyle also, which appear to differ from venous blood, principally in both containing fewer red particles, while the latter again has more oil, on which its opacity depends, as well as some sugar: it is a mistake, however, to imagine that its properties are materially affected by the character of the aliment, from which indeed it would be easy to prove that only a very small proportion of it is derived (*a*). The red particles of these fluids, which constitute about twelve parts in a hundred of venous blood, but are much less abundant in lymph, and still less so in chyle, have been very generally described as consisting of a central, colourless nucleus surrounded by a red vesicle (*b*); and it was till very lately supposed that the globules recently alluded to as found in the several Tissues and other Fluids, were merely these nuclei, but without their red envelopes, as it was, that the coagulation of the venous blood, lymph, and chyle took place from the coalition with fibres of the same nuclei, which had previously shuffled off their red envelopes (*c*). It has been for some time, however, known that these fluids, when drawn from their vessels, soon display globules quite distinct from their red particles—and they are in fact the only fluids, it is said, which really contain any such globules—and that it is upon the coalition of these, which have been called lymph globules, that their coagulation, at least in part, depends (*d*); while the recent observations, on the one hand, that these red particles really contain no such nuclei (*e*), and, on the other, that it is from the liquor sanguinis, and not from the red particles, that the clot is formed (*f*), are sufficient to establish it that the coagulation of these fluids is quite independent of the red particles which they contain. With respect to the number, size, and form, of the proper red particles of these fluids, there has been the utmost discrepancy. The prevailing impression is, that they are less numerous and larger in fishes and reptiles than in any other vertebrate animals, while they are most numerous and smallest in birds, and that in all the lower animals they are more or less oval or elliptical. In man their size has been represented at different times as between the 6000th and 3000th of an inch in diameter (*g*); while their form has been

well, or better, when heated than when exposed to cold; and to attribute these changes to a loss of vitality, is to impose upon ourselves the onus of proving that it ever possessed this property—a task, as will be in future shewn—of no little difficulty. The blood coagulates and separates under any circumstances in which it is allowed fully to develop its fibrin, even though within the body, as in an ecchymosis—nay even though within its own proper vessels, provided it does not pass, at rapid intervals, through the parenchyma, as in an aneurismal sac; and the opinion that it is by the repeated decompositions which it undergoes in the parenchyma that these changes are obviated, is supported, among other things, by the fact, that in all inflammatory diseases, which are seated principally in the capillary arteries—the healthy office of which seems to be to decompose it—the tendency to these changes is increased, whereas in all congestive diseases, which are seated principally in the radicles of the veins—the healthy office of which seems to be to re-compose it—this tendency is more or less counteracted. But on this subject more hereafter.

(*a*) From the rough estimate lately made, it will appear that the left heart of man sends out nearly fifteen thousand pounds of blood daily; and of this, supposing the veins and lymphiferous or chyloferous vessels to bring back each in proportion to their respective capacities, the former will return about ten thousand pounds, and the latter about five thousand. Now, we can hardly estimate the capacity of the chyloferous vessels at less than one fiftieth of that of the whole lymphiferous and chyloferous system; so that they would transmit, say one hun-

dred pounds of fluid in the four-and-twenty hours, although they received nothing whatever from the aliment; and the utmost that this can add to such a mass—presuming the greater part of the watery and alcoholic portions to be taken up by the veins—does not exceed a very few ounces, the principal elements of which, moreover, are precisely the same, whether the food have been vegetable or animal! It is a common-place and erroneous view of the matter to regard the lymphiferous and chyloferous vessels otherwise than as instrumental, essentially to circulation, and adventitiously only to absorption—they are in every respect analogous to veins, and are equally continuous with the arteries, as originally assumed by Bartholin, and proved by Nuck, Cowper, and Ruysch, as veins are; and the Hunters and their school have done an irreparable injury to science by diverting the minds of physiologists from this relation.

(*b*) The discovery of these red particles of the blood was one of the first effects of the application of the microscope to philosophy, and was made by Leeuwenhoek, about the year 1675. The description of their structure, above alluded to, is that of Hewson, corroborated by Dr. Young.

(*c*) Dumas and Prevost.

(*d*) Home and Bauer (*Phil. Trans.* 1811).

(*e*) Hodgkin and Lister (*Phil. Mag. and Ann. of Philosophy*, 1827).

(*f*) Babington (*Med. Chir. Trans.* 1831).

(*g*) Home represents them as the 6000th part of an inch in diameter, Haller as the 5000th, Wollaston as the 4900th, Young as the 4416th, Blumenbach as the 3300th, and Sprengel as the 3000th.

described sometimes as spherical (*a*), and at others as oval (*b*), lenticular (*c*), annular (*d*), flat, with rounded edges (*e*), or altogether irregular (*f*): the general opinion appears to be that they are spherical—but fortunately the determination of the question does not appear to be of much importance. The average quantity of venous blood, lymph, and chyle in the body of an adult human being, at any given time, has been above represented as thirty-six pounds—twenty-four of the first, and twelve of the two last—assuming that the average quantity of the whole blood is thirty pounds, but upon this subject also there is great discordance of opinion (*g*): it is pretty well established, however, that the relative quantity of venous blood is greatest in old persons and males, and that of lymph and chyle in young persons and females, for reasons already assigned.

As the great bulk of the venous blood, lymph, and chyle, is derived immediately from the arterial blood, to which some additions are made by absorption from various parts, so the great bulk of the *arterial blood* is derived immediately from the former fluids, to which, perhaps, something is added in the way of absorption by the pulmonary veins (*h*) from the lungs; but nevertheless the arterial blood, as formed in one definite organ only, is, unlike the fluids just mentioned, precisely of the same character, from whatever artery it be taken (*i*). With respect to its physical properties, the following are the

(*Of Arterial Blood*)

Colour, . . . Bright Scarlet;
Aspect, . . . Semitransparent;
Consistence, . . Viscid;
Specific gravity, 1049.

Its nature, while circulating, appears to be similar to that of venous blood, and the spontaneous changes which it afterwards undergoes are likewise similar to those sustained by venous blood, lymph and chyle, and to be explained in the same manner: it is said, however, to undergo these changes somewhat more quickly. It contains, also, a greater number of the red particles. The average quantity of arterial blood, at any given time in the body of an adult human being has been represented, on the premises already assumed, as six pounds; but the relative quantity is greatest in children and females.

Of *Carbonic acid*, as a secretion from the sap of plants, and from the venous blood, mixed with the lymph and chyle of animals, it is unnecessary to take notice in this place, further than to shew that its insertion here was not unadvised. That it is not formed by the direct combination of the oxygen of the air with the carbon of the venous blood, in the respiratory organs is rendered certain, by all the arguments brought forward to prove that the whole of the oxygen which disappears in respiration is absorbed into the arterial blood (*k*); and that it does not, nevertheless, reach the respiratory organ ready-made with the venous blood, is established by the fact that no such carbonic acid is contained in this fluid (*l*). On the other hand, the eminently philosophical views that have lately been taken, as well of the general structure of the lungs—which are now properly described as a large conglomerate gland (*m*)—as of the particular relation which subsists between this organ and the liver—direct, as to structure and function, and inverse, in all tribes of animals, under all circumstances, as to size and importance (*n*), is decidedly in favour of the opinion that the carbonic acid, voided in respiration, is, not only a secretion, but one of which hepatic bile is in some measure vicarious. Whether the quantity of oxygen which has been absorbed, determines that of carbonic acid to be secreted, or the quantity of carbonic acid which has been secreted determines that of oxygen to be absorbed—so that the two are found very nearly to correspond—will fall to be considered

(*a*) Leeuwenhoek, Haller, Blumenbach, Cavallo, Rudolphi, &c.

(*b*) Sprengel, &c.

(*c*) Hewson, Falconer, &c.

(*d*) Delatorre, &c.

(*e*) Hodgkin, Lister, &c.

(*f*) Amici, &c. As Dr. Milligan expresses it, they have been compared “to a globe, to a bladder with a pea in it, to a piece of money, to a drum, to a candlestick, to a hexaedron, and I know not what;” and, according to Magendie, they may be made to present almost any form—“suivant qu’elles soient placées exactement, ou inexactement, au foyer du microscope.” (*Précis de Physiol.* 1816.)

(*g*) By Harvey, Allen Mullen, Abildgard, and Blumenbach, the whole quantity of

blood is computed at only 8 lbs.; by Lower at 10; by Sprengel at from 10 to 15; by Borelli at 20; by Quesnay at 28; by Haller—the estimate followed above—at 30; by D’Hamberger at 80; by Keill at 100.

(*h*) See the experiments of Autenreith, Mayer, Magendie, and others, in proof of the great absorbing power of these vessels.

(*i*) Le Gallois, in opposition to Nesbitt and Dumas.

(*k*) Spallanzani, Vogel, Coutanceau, Nyssen, Edwards, Carson, &c.

(*l*) Dr. John Davy, Duncan, &c., successfully opposed to M’Bride, Vogel, Hunter, Vauquelin, Brande, Home and Bauer, Scudamore, &c.

(*m*) Jourdan and Breschet, &c.

(*n*) Tiedemann &c.

elsewhere. The average amount of carbonic acid excreted daily, is, in man, about forty-six thousand cubic inches, the weight of which is about forty-three ounces (a).

Hepatic Bile is still more certainly a secretion from the blood of the Vena Portæ, than Carbonic Acid is from the Pulmonary Artery, since the former fact may be proved by direct experiment (b); nor do the cases on record in which this vessel did not go to the liver, while nevertheless bile was found in the gall bladder (c), tend at all to invalidate this conclusion, since a great proportion of the cystic bile is always a secretion of the hepatic artery, no branches of the vena portæ being distributed upon the gall bladder. Hepatic bile differs in its physical properties from cystic bile, principally in being destitute of all bitterness; which is the case of course with all animals destitute of a gall bladder. It is in all probability, like carbonic acid, formed only to be evacuated, when it passes directly into the intestines; but that portion of it which reaches the cystic duct and gall bladder, and is mixed with the bitter secretion of these organs, perhaps performs some obscure end in the animal economy. The diurnal amount excreted, since it is only with the stools that it can pass out of the body, is not easily estimated; but it is probably very small (d).

Of the fluids above enumerated, as secreted from the Cambium of plants, nothing needs be said at present; and of those secreted from the arterial blood of animals, it is not necessary to speak particularly. They are commonly described as either secretions or excretions; but the distinction is not precise, and, what is worse, it is illogical, since all excretions are secretions to begin with. Of these fluids some are passing out of the body, more or less, continually; others at regular or irregular intervals; others only accidentally, and being in general re-absorbed; and others never under any circumstances, being always so re-absorbed, or otherwise disposed of within the body.

As examples of the first, in addition to the carbonic acid and hepatic bile already spoken of, are the *Halitus from the Lungs*, amounting on an average perhaps to ten ounces in the day; the *sweat*, insensible and sensible, to about forty ounces (e); the stools, which are not, as is commonly supposed, merely the residual parts of the aliment, but a proper secretion from the follicles of the large intestines, analogous to the ambergris of the white Whale (*Physeter* 42), the civet of the Pole-cat (*Viverra* 49), &c., and which in conjunction with the bile, do not on an average exceed five ounces (f); and the urine, amounting perhaps to about thirty-two (g). On the whole, then, the human body voids day by day about one hundred and thirty ounces in this way; which, estimating the quantity of absorbed oxygen to weigh the odd thirty ounces, leaves about one hundred to be supplied by the aliment.

To the second head of Fluids belong the *Menstrual Fluid*, the *Milk*, and the *Semen*. The quantity of the first passed by the women of this country at each menstrual period, is perhaps from three to six ounces (h); that of the others has not been estimated.

To the third head belong the *Mucilage*, the *Tears*, and the *Saliva*, each of which, at least as occurring in man, is intended by Nature to be re-absorbed in proportion as it is deposited, a certain quantity being always present for a specific purpose; and it is only from the habitual cataract more or less constantly prevalent in cold climates, or from the practice of snuff-taking, that an overflow of the mucilage of the nostrils ever takes place, as it is only from mental emotions or other accidental causes that the tears are ever in excess, and from other mental emotions, or from smoking, chewing tobacco, and so forth, that spitting is ever necessary (i). In some animals, however, as the Java Swallow (*Hirundo* 38),

(a) Davy says 45,504 cubic inches, Lavoisier, 46,037, Menzies, 51,840.

(b) See the *Annali Univ.* for 1825.

(c) Abernethy (*Phil. Trans.* 1793), Powell (*On the Bile, &c.* 1800), Lawrence (*Med. Chir. Trans.* 1814).

(d) By Glisson the diurnal amount of the whole bile was computed at two ounces only, and by Haller at twenty. Magendie thinks it probable that it is about two pounds.

(e) The results of calculations by Sancto-rius, Dodart, Keill, De Gorter, Lavoisier, Séguin, Abernethy, Cruikshank and others of the diurnal amount of transpired halitus are most discordant: perhaps, however, that above stated is an approach to the average in temperate climates and weather.

(f) Sanctorius says four ounces; Keill five.

(g) Sanctorius estimates it at 16 ounces;

Keill at 30; Prout, who is followed above, at 32; Bostock at 40; Haller at 49.

(h) According to Leroy, Baudeloque, De Haen and Smellie, the average quantity is 3 ounces; according to Haller, Astruc, and Burns, it is 6; according to Rousset and Friend it is 13; and according to Hippocrates it is 20.

(i) The countenance extended in this country to the unnatural practice of blowing the nose is an excellent example of the adaptation of the tastes of man to his necessities. In ancient Rome a man might divorce his wife for this offence; and in Persia, and other warm regions, it is not less abominated at present. It is no more intended by nature that the nose should require wiping, than that the urethra, or any other mucous passage should stand in need of the same operation.

the mucilage of the gullet and stomach is periodically voided in large quantities, in order to furnish the materials from which it constructs its nest; and it is of a similar fluid, drawn from a specific apparatus, and inspissated by its absorption of the oxygen of the air, that the Cockle (*Cardium* 9), forms its byssus, the Spider (*Aranea*)¹⁷ its web, and the Silk-worm (*Phalœna* 20), its cocoon. The venom of serpents is, in like manner, analogous to saliva. The quantity of mucilage, tears, and saliva at any given time present in the human body is not easily ascertained; but when we take into consideration the immense extent of the mucous surfaces, it will be obvious that that of the mucilage at least must be very considerable (a).

The remaining Fluids, or those which are constantly so re-absorbed, or otherwise disposed of within the body, are the *Halitus of the Serous Sacs*, the *Gastric Fluid*, the *Humours of the Eye*, the *Fluid of Cotugno*, the *Fat*, the *Marrow*, the *Sinovia*, the *Buccal Fluid*, probably the *Cystic Bile*, the *Fluid of Meibom*, the *Sebaceous Matter of the Surface*, and the *Pancreatic Fluid*. They are all present in very small quantities, perhaps at any given time, with the exception of the fat, which, upon an average, amounts to about one twentieth of the weight of the body, or between seven and eight pounds in a middle-aged man of moderate size and obesity; its relative quantity, however, is generally greater in the two extremes of life, and in females.

(a) By Haller the quantity of mucilage secreted every day by the intestines alone is computed at eight pounds; but this affords no criterion for judging of the quantity at any given time present in this canal; and the same may be said of the estimates of the

quantity of secreted saliva, which, according to Nuck is eight or ten ounces in the day, according to Cruikshank a pound, according to Paris from five to eight ounces every meal.

CLINICAL LECTURES,

By DR. RYAN,

Delivered at the Western Dispensary, Westminster;

Session 1834-35.

LECTURE I.

Pathology and Treatment of Dropsy—Supervention of Disease after Scarlatina, followed by Convulsions and Death in a few hours—Malignity of Scarlatina—Purulent Discharge from the Nostrils and Ears—Remarks on Scarlatina—Dropsy in a Child treated with Elaterium—Utility of combining various Remedies—Dropsy supervening immediately after Parturition.

GENTLEMEN—I have selected for this day's lecture a few of those cases of dropsy which you have observed; and as some of the patients are still under treatment, you will have an opportunity hereafter of witnessing the results of the practice employed. Before I narrate the history of the cases, I shall briefly remind you of the pathology, etiology, and treatment of the disease denominated dropsy. It consists in a preternatural effusion of serum, or the watery part of the blood, into the cellular or serous membrane of a part or the whole of the body. Thus nosologists describe dropsy of the brain, chest, abdomen, flesh, eye, spine, tunica va-

ginalis testis, uterus and ovary. In all these parts there is serous or cellular tissue, but according to modern physiologists these are identical in the embryonary state of organization. The exhalent vessels in health deposit a quantity of fluid, which is removed by the absorbents; but when the effusion of this fluid is greatly and inordinately increased, the absorbents cannot remove it, and accumulation of it, or dropsy, is the result. The equilibrium between exhalation and absorption is deranged, the one function predominates over the other, and disease is the consequence.

The exciting causes of dropsy are all diseases which impede the free circulation of the blood, as enlargement of the liver, which presses on the portal vein, impedes the circulation from the abdominal viscera, and determines blood to the peritoneum or serous coat of the bowels; diseases of the heart and kidney, and lastly, certain diseases of the skin. When there is disease in the right side of the heart, which impedes the circulation of the venous blood of the whole body, there is a congested state of the serous or cellular membrane of all parts, and the result is effusion or dropsy. When one or both kidneys are diseased, and do not perform their function of eliminating or disposing of a great portion of the serum of the blood by urine, it must in some degree be carried off by the skin or lungs; but these organs cannot perform an office for which they are very partially intended, the serum accumulates, and forms dropsy in some part or other. When the skin is diseased, as in scarlatina, and its function deranged, we often observe

dropsy as a consequence; and so with regard to the lungs, for at the approach of death in phthisis, we frequently see œdema or dropsy of one or both lower extremities. The functions of the skin and lungs in giving an outlet to some portion of the serous part of the blood, are secondary to that of the kidneys; and therefore if the latter act freely in phthisis or after scarlatina, dropsy may be prevented in most cases; but even these organs are overpowered, if I may use the term, when there is a general congestion of venous blood caused by organic disease of the liver, heart, or by morbid tumours pressing on the large venous trunks; and when they (the kidneys) are in a state of disorganization. The other exciting causes are excessive discharges of any kind, suppression of customary evacuations, exposure to a moist cold atmosphere, sudden repression or disappearance of certain eruptive diseases, intemperance, abuse of spirituous liquors, drinking large quantities of watery fluids, eruptive fevers (especially scarlatina and measles), and intermittents of long standing, chronic diseases which weaken the arterial and venous circulation, diarrhœa, dysentery, phthisis, gout, chlorosis, visceral diseases, excessive depletion or blood-letting; in a word, all debilitating diseases, because all diminish the circulation and favour venous congestion. The predisposing cause is a leucophlematic temperament, characterised by a pallid, bloated countenance, and want of activity or muscular energy. The proximate cause is an effusion of serum, ascribed by some to a congested condition, induced by a state approaching to sub-acute inflammation, and by others to debility.

The symptoms are swelling of the insteps or ankles in the evening, which gradually or suddenly ascends to the leg, thigh, and trunk of the body, and sooner or later there is effusion into the serous cavity of the chest or abdomen. The cellular tissue all over the body may also be infiltrated, and when that portion in the lungs is affected, there will be difficult respiration, cough, and a watery expectoration. The countenance is pale and bloated, the skin pale and dry, the urine scanty, pale, or high coloured, depositing sediments of different colours; the appetite is bad, there is insatiable thirst, costiveness and generally a small weak pulse, and great prostration of strength. In young subjects the pulse may be strong and full; and when the skin is distended it may become inflamed, tense or shining, or in debilitated subjects allows an exudation of serum through its pores; or it sometimes is partially covered with vesicles or small blisters, which burst and allow the fluid to escape—a fact that leads us to employ punctures, acupuncturations, and scarifications. There is now a lady aged 23 years under my care, who has laboured under anasarca and ascites for ten years; and in this case “the watery

fluid,” trickles down the lower extremities so profusely as to wet her stockings; and when she allows her arm to hang over the back of a chair (a position which impedes the circulation) “the water drops from the tops of her fingers.” There is no breach of the skin, which is remarkably pale.

The prognosis in dropsy is favourable, when the disease depends on causes which are easily removed; when it comes suddenly, independently of visceral disorganization, the strength being little diminished, the constitution unimpaired, the appetite tolerably good, the thirst slight, the urine moderately copious, the respiration slightly affected or natural. The prognosis is unfavourable when the disease is caused by disorganization of the liver, heart, kidneys, &c. accompanied by insatiable thirst, laborious respiration, dry skin, paucity of high, dark-coloured, or fetid urine, petechiæ, hæmorrhages from the gums, stomach, bowels, bladder, &c.

The indications of treatment are, 1st. to excite the absorption or evacuation of the effused fluid; 2nd. to prevent it from re-accumulating; 3rd. to improve and restore the general health.

To fulfil the first indication we employ the various remedies which act on those organs destined to carry off the serous part of the blood, as the kidneys, bowels, skin and lungs. We therefore exhibit such *cathartics*, as produce watery evacuations (hydragogue cathartics)—elaterium, camboge, scammony, jalap combined with supertartrate of potass (cream of tartar), croton oil, submuriate of mercury, colocynth, &c., *diuretics*—squill, digitalis, acetate, hydriodate—nitrate and supertartrate of potass, colchicum, nitrous æther, juniper, lytta, &c. &c.—*diaphoretics*, as compound powder of ipecacuanha, antimonial preparations, tepid diluents, vapour and warm baths, &c., friction, punctures, acupunctures, scarifications, iodine, and antimonial ointments, blisters, stimulating liniments, bandages, &c. Lastly, we improve the appetite, digestion, and general health, by tonics, quinine, bitter infusions, regular exercise, cold bathing, nutritious aliment, &c.

Thus we excite and cause counter-irritation—in fact, determination of blood in the extensive surfaces of the intestinal tube, the skin, the lungs, while we also excite the kidneys; we set up a number of temporary artificial disorders, we cause less blood to be sent through that portion of the exhalents which formed the dropsy; the absorbents are also excited, and act more powerfully, the increased exhalation of serum being diminished or superseded, and by the remedies mentioned we often succeed in curing the disease. But we fail when incurable disorganizations of the heart, kidneys, or liver, have induced dropsy. The organic diseases of the first two organs, when long established (and they generally come on insidiously), defy all our remedies, and so do many lesions

of the liver, though mercury and iodine will often succeed in dissipating simple hepatic engorgement, or what is generally called chronic liver disease—a fact you have repeatedly witnessed at this charity. It is also important to bear in mind, that the liver, like all other organs, may be the seat of numerous disorganizations, hydatids, concretions, cancer, fungus hæmatodes, ossification, &c., which all our resources cannot remedy.

In the enumeration of therapeutical agents I have not mentioned blood-letting or emetics, because these are not generally employed by practitioners; though the first is valuable in young plethoric subjects, who are suddenly attacked with dropsy, but is most unquestionably injurious in young or chlorotic, and in aged persons. Emetics are still more rarely administered.

It may be urged that we use depletion in hydrocephalic cases. We do before, but scarcely ever after the dropsical effusion. In the majority of dropsical patients the effusion has existed for weeks or months before we are consulted, the general health is bad, the appetite gone, and the symptoms the reverse of those which indicate the use of the depletory measures. Thus, in the case of the child aged two years, which you have repeatedly seen, hydrocephalus, according to the mother's statement, has existed since it was six weeks old; it was deprived of all power of motion, of vision, and nearly of sensation; the head measured twenty-three inches in circumference at the time of admission, and is now reduced to twenty-two inches and a quarter by the internal and external use of hydriodate of potass, calomel, rhubarb, &c., with sensation greatly improved;—in this case, I say, no judicious practitioner would propose depletory measures. But when dropsy comes on suddenly in a few hours, or in one night, when the patient is in the vigour of life, and the pulse is full and strong, depletion is a valuable remedy—that is to say, when it is employed during the existence of congestion, and while serum is being effused.

Having made these general observations on the pathology and treatment of dropsy, I shall now direct your attention to the cases of some of my patients.

Anasarca and Ascites after Scarlatina.—

A. B., aged five years, was admitted under my care, October 21st, 1834. He laboured under scarlatina a week previously, and has now general anasarca with ascites. The integuments of the scrotum and penis are very much distended and enlarged, the respiration is short and laborious; there is much cough, loss of appetite, confined bowels, and paucity of urine. He was ordered the following medicine:

Rx. Pulveris jalapæ compositi, 3j;
Hydrargyri submuriatis, gr. x;
Pulveris digitalis, } āāij;
——— scillæ, }

Pulveris antimonialis, gr. vj;

——— cinnamomi, c. gr. x.

In chartulas vi, divide quarum capiat unam mane vespereque, nisi alvus nimis soluta sit.

Rx. Potassæ acetatis, ℥j;
Aquæ destillatæ, 3 iss;
Syrupi simplicis, 3 iv.

Sit mistura, cujus capiat cochleare medium bis in die.

He was ordered imperial as a drink. He continued these medicines with decided relief for a week, the anasarca and scrotal infiltration were diminished, but not so much as was desirable.

28. He was ordered the following remedies:

Rx. Elaterii extracti, gr. j;
Hydrarg. submur., gr. xij;
P. Cinnamon. comp., ℥j.

Divide in chartulas xij., ex quibus sumatur una bis vel ter in die, nisi alvus nimis purgetur: iteretur mistura ut antea.

Nov. 4. The medicines acted powerfully on the digestive and renal evacuations, anasarca and ascites gone; no cough or difficulty of respiration; appetite very much improved.

Contr. mistura.

Habeat. pulv. jalapæ. c. ℥ss., pro re nata, hora somni.

7th. Considered by his mother quite well—powders continued every other night—discharged.

Clinical Remarks.—We have lately had several opportunities of witnessing the efficacy of the medicines prescribed for this patient, in cases of general and local dropsy (anasarca and ascites), in adults as well as children, when these complaints were not caused by diseases of the liver, kidneys, heart, or by tumours pressing on the large vessels in the abdomen. I need scarcely remind you that when organic disease of the liver, kidneys, or heart exists, or a tumour presses on the ascending cava, and prevents the return of the venous blood to the heart, by pressing on the vessels whose function it is to convey it to that organ, the peritoneum must become congested, the serous portion of the blood, which ought to be disposed of in the ordinary manner, will be effused into the cavity of the abdomen, and cause ascites or enter the cellular tissue and induce anasarca.

It is therefore a medical axiom that we cannot cure such dropsies until we remove their cause; for while this exists, the effect must continue; the maxim, “ablata causa, tollitur effectus” is therefore correct, as regards the disease under consideration. Our little patient had no disorganization of the viscera alluded to; and therefore his case was, comparatively speaking, favourable. His disease supervened on scarlatina, a frequent sequence in adults as well as in children. It is not easy to explain the cause of the frequency

of its occurrence; but it appears to me to depend on the morbid effects of scarlatina on the skin. The cuticle over the whole body may disquamate or peel off, specimens of which I now shew you; and this condition can scarcely occur without affecting the skin, which is so intimately connected with the cuticle. Be the cause what it may, every experienced practitioner knows that anasarca, with or without ascites, frequently supervenes during the convalescence after scarlatina. The super-vention of one disease on the other, may take place in a few hours, days, or weeks. I remember a singular illustration which I observed with Mr. Heath, of the New Road, an old pupil of this class, in Grays-inn-lane. A youth, aged twenty years, of a full habit, had recovered from the malignant form of scarlatina. He was convalescent for a month. The season of the year was spring. He had dined heartily at one o'clock, and after dinner went into Grays-inn Square to take a walk—the day was very cold. He returned home, (and his residence was in the immediate vicinity); at half-past two o'clock in the afternoon he was suddenly seized with general anasarca; this was immediately followed by convulsions, and I was requested to see him. I examined his stomach, lest it might be overloaded, as he had dined so recently, and found it empty. I ordered him to be bled, his head shaved, leeches to be applied to the base of the skull, both temporal arteries to be opened, his bowels to be purged with croton oil, cupping on the nape of the neck, cold applications to his head, mustard cataplasms sprinkled with warm oil of turpentine to his feet and legs, and notwithstanding all these remedies, which were employed in rapid succession, he died at two o'clock on the following morning. My friend and myself examined the body. On making the usual incision through the scalp, we were astonished at the quantity of serum, or what is popularly denominated watery effusion. It deluged the table, and was received into a vessel. The brain was highly congested, so were the lungs, but the stomach was empty. It is right to mention that the sister of this individual had previously died of scarlatina, and she had had an unusual symptom, a purulent discharge from both nostrils and ears. You know, as anatomists, that inflammation of the mucous membrane of the fauces (throat) may extend to the Schneiderian mucous membrane of the nostrils, as well as along the same kind of membrane, which lines the Eustachian tubes, all of which are continuous, and thus may produce discharges from the nose and ears.

It is stated by many writers on practice of medicine, that scarlatina is in general a mild disease, and seldom proves fatal. Scarlatina, when it affects the fauces, (*scarlatina anginosa vel cynanchina*) is often a formidable and dangerous disease; but when there is sloughing (*scarlatina maligna*, malignant scar-

latina) there are few complaints so dangerous or fatal. In either of the two last forms it frequently destroys several children in schools, or in the same family. I have frequently seen three and four children of one family, lying dead at the same time, in consequence of this disease. The mild form, or *scarlatina simplex*, seldom proves fatal. Scarlatina is so fatal, that our German brethren consider themselves entitled to great praise for having discovered what they suppose to be a preventive. This is the extract of belladonna, in proper doses, according to the different ages. Dr. Macmichael has also written in favour of this remedy. But I have not had sufficient opportunities as yet, to warrant me in arriving at a conclusion as to its efficacy. There is one thing, however, in its favour; that it can do no harm, when administered in proper doses. It was proposed by Hanhemann, in 1807, on the principle that it caused symptoms similar to scarlatina. It was exhibited by Berndt in one hundred and ninety-five cases, in 1818—19, of which fourteen only were infected; and, at a subsequent period, when he used a stronger dose, every one escaped. Koreff, professor at Berlin, exhibited the medicine on the recommendation of Soemmering, and states, that neither season nor climate appeared to diminish its preservative power. Hufeland confirms the preceding statements, (*Journ. der Practischen Heilkunde*, 1825), by declaring he has never known it to fail. Two or three grains of the extract, in an ounce of cinnamon water, was the prescription—the dose, two or three drops twice a-day, to infants under two years old, and one drop in addition for every year above that age. But to revert to our patient, A. B. aged five years. Some of you may imagine that he was not a fit subject for elaterium; you have learned this from the works on *Materia Medica*, whose authors in general quote from their predecessors, without taking the trouble of thinking for themselves. They all inculcate the erroneous doctrine—you must not prescribe elaterium for young or old persons. Their doctrine is correct, until we consider developement and physical power; but when we do, it is erroneous. You observed that our little patient was not sufficiently relieved by ordinary remedies; I therefore thought, that more powerful medicines were necessary. And what objection, I should like to inquire, is there to any medicine in proper doses, or in other words, proportioned to the different ages and physical powers? I know of none. We can subdivide the dose of any medicine like the homœopaths, to infinity. I therefore ordered elaterium for this child, contrary to the received opinion, and you have witnessed the beneficial result.

There is another point of practice which requires an explanation. The integuments of the scrotum and penis were so enormously distended, that some of you hinted to me the propriety of scarification, or acupunctu-

ration. The idea was good in theory, but in this case bad in practice; moreover, the mother would not consent to it. I declined to order any operation, because I had repeatedly seen worse cases do well, by the remedies prescribed. Moreover, Sir A. Cooper has well observed, "The best surgeon is he who performs the fewest operations." Why should we operate, if we need not? I see no valid reason. If our remedial means failed, and that there was no other alternative but an operation, then, and only then, would it be justifiable. Our patient got well by medicines, without any operation, and this was positive proof of the efficacy of the treatment. —Lastly, some of you, no doubt, are surprised at the heterogeneous nature of the powders prescribed for this child, when admitted. My answer is, that considering the innumerable varieties of constitution, or to speak scientifically, idiosyncrasies, or peculiarities of habit, much more good is to be effected by a combination like that which I prescribed, than by ordering its component parts separately. The ingredients in the powders are generally ordered in separate forms, as draughts, pills, powders, &c.—all are given at different hours of the day; all are taken into the stomach; and as there is no objection to unite them in powders, why not do so, and save the patient the annoyance of swallowing physic every hour, which few individuals relish, not even the members of our own profession, and much less children. The powders prescribed were calculated to act on the bowels, kidneys, lungs, and skin. The compound powder of jalap, with calomel, acts as a hydragogue cathartic (the former was the best remedy in dropsy, according to Cullen); the rest of the ingredients act upon the kidneys, skin, and lungs, the organs which dispose of the serous or watery parts of the blood; and thus we set up artificial irritations or diseases in these organs, whose functions are to remove the thinner parts of the blood, and consequently prevent them from being deposited in the cavity of the peritoneum, ascites (abdominal dropsy), or in the cellular tissue, which pervades all parts of the body, (anasarca or general dropsy).

Ascites supervening immediately after Parturition.—E. H. aged 21½, a thin spare habit, of a bilious temperament, unmarried, and very hysterical, was admitted under my care, at the recommendation of Mr. M'Cann, surgeon obstetrician to this charity. About six months ago she was delivered, at the full time, of an illegitimate infant, which was born alive, after a labour which continued for 24 hours. She stated, in the presence of Mr. Churchill, of Strutton Ground, a gentleman in practice, and a pupil of this dispensary, who noted her case, that immediately after delivery, her abdomen swelled to a considerable size, and did not subside until

she was admitted at this institution. When the swelling of the abdomen supervened after delivery, she complained of great thirst, paucity of urine, swelling of the legs, bad appetite, pain in the right shoulder, which she did not experience before delivery. She suffered very much from dejection and depression of spirits before her confinement, as she was illicitly pregnant, and deserted by her heartless seducer. She consulted Dr. — who told her she had dropsy. The medicines he prescribed for her purged her very violently, but did not increase her urine, and the swelling of her abdomen augmented while she was taking them. She then suffered from violent pains in the abdomen; the medicine was composed, according to her account, of a tea-spoonful of castor oil, and three drops from a very small bottle, (query, croton oil?). The pains in her abdomen became so violent as to affect her respiration, and her mother determined to call in Mr. M'Cann, of Parliament Street, who attended her four days, and then placed her under my care. When she was admitted at the dispensary, she suffered from violent diarrhoea, which defied all medicine, except a pill composed of s. cupri, gr. ij; opii gr. iij; confect. rosæ, 3 ss.—divide in pilulas xvj—capiat j, bis vel ter in die. In fact, so irritable were her bowels in consequence of the operation of the croton oil, that the diuretic medicines ordered, and which will be mentioned immediately, often purged her excessively. Purgatives were contra-indicated.

She was admitted in September last. Her symptoms then were, great debility, distinct fluctuation in the abdomen, accompanied by thirst, paucity of urine, but no anasarca of the lower extremities. She was ordered a diuretic mixture composed of hydriodate of potass, 3j, distilled water, 3vj, to be sweetened when about to be taken; two table-spoonful twice or thrice a day. She had likewise the infusion of quassia, with quinine. She continued these remedies until Nov. 28th, during which time she gradually diminished in size; and this fact she ascertained by frequent admeasurement of the abdomen, with a graduated tape, which was accurately subdivided in inches.

Nov. 28th. R. Potassæ acetatis, 3iv;
Aquæ menthæ, pip. 3vj;
Sp. æther, nitrosi, 3ij;
Tinct. opii, 3j.
Syrupi auranti, 3j;
Dosis 3ss, ter in die.

R. Hydriodatis potassæ, ʒj;
Adipis prepar., 3j.

A drachm of this ointment was to be rubbed, night and morning, over the surface of the abdomen. She continued these remedies until Jan. 9th, 1836, when she reported herself, in the presence of Mr. Churchill and Mr. Dawson, of her usual size when in health. On being questioned as to the grounds on which she arrived at this conclu-

sion, she stated, that the stays which she had by her, and when in health, now fitted her exactly as before her illness.

Nevertheless, there was evident fluctuation in the abdomen, which was ascertained by Mr. Churchill and Mr. Dawson, as well as myself; and I therefore advised her to continue on the books, until I pronounced her perfectly cured. Jan. 28th.—There is still fluctuation. She thinks herself well, but I have advised her to continue her medicine. She is wonderfully improved, her appetite and spirits are good, her bowels and menstruation regular.

Clinical remarks. This was a very singular case—dropsy, supervening in a young woman in the prime of life immediately after a first parturition. The great irritability of the bowels was most probably induced by the croton oil. The diarrhoea was restrained by *s. cupri*, with opium only. I should have stated that ordinary astringents had previously failed.

Mr. Churchill recollects a case of blue cholera to which he called me, and in which the rice-coloured evacuations from the bowels were restrained by *s. cupri*. The hydriodate of potass, was prescribed in mixture as a diuretic, as it had proved effectual in dropsy caused by chronic liver disease in the practices of my much respected friends, Dr. Blake of Nottingham, and Mr. Hughes of Holborn.—*Land. Med. and Surg. Jour.*, vol. v, 1834.

An ointment containing this medicine was rubbed over the region of the liver, and the surface of the enlarged abdomen, to excite or stimulate the absorbents.

There was pain in the right shoulder, which most probably arose from functional or structural derangement of the liver. Was her dropsy caused by mental dejection or by hepatic disorder or disease? It is extremely difficult to answer this question. In fine, both these cases are worthy of your recollection and reflection. I shall detail other interesting cases at our next meeting.

STATE OF MEDICINE AT NEWCASTLE-UPON-TYNE.

To the Editor of the Original Medical and Surgical Journal.

SIR—In my letter to you (dated the 25th of December, 1834), on the Medical Institutions of Newcastle-upon-Tyne, it is stated, that “no instruction, in the form of lectures, is given by the physicians, nor are any regular reports made at their visits to the wards.” The accuracy of this statement is unquestioned; I shall consequently make a few observations on this fact. It may in the first place be asked, Why is no clinical instruction given by the physicians in so excellent an institution? This question has been variously answered, as for example, the physicians cannot devote a sufficient portion of time to such duty; there are too few pupils to render it worth

their while to do it; and lastly, we are told that if it were done, it would be at the expense of the comfort of the patients. In regard to the first of these three reasons (if so they may be called), it is too ridiculous to require comment, farther than simply comparing the duties of metropolitan and provincial physicians in full practice. In reply to the second reason, the *paucity of pupils*, I would simply ask, whence does this arise? Is it that the number of medical pupils in the district is small? No, the opposite of this can be attested by every practitioner in the district. That a small proportion of the pupils attend the infirmary I shall not attempt to deny: I know the fact, and by many I have been told, “that if regular instruction were to be had at the hospital they would attend it; but as it is in regard to the physicians, and was a very short time ago with the surgeons also, they know that little benefit can be derived from such attendance.” Here then I conceive we have the “proximate cause.” Let the physicians deliver lectures, and they will very soon find that such lectures will be attended. In regard to the *objection* that such a course of instruction interferes with the comfort of the patients, no one can deny that there are cases in which delicacy may forbid it; but it will be conceded that these are only to be regarded as exceptions; and by those who have seen clinical tuition in its most perfect form, it will be allowed that it actually contributes to, instead of interfering with the interests of the patients. Let us however even admit that it does interfere with the comfort of the inmates of an hospital, but let us contemplate the immense advantages derived from it; by this means we shall be enabled to decide whether or not a great benefit to society is to be sacrificed, because it *interferes* with the *prejudices* of a few. Let us now turn from the physicians who do not lecture, to the surgeons who do. There are, as formerly stated, four surgeons, by whom alternately two lectures are delivered in the week. In other words, A. lectures to day, and does not again lecture till this day fortnight. Let us for one moment reflect upon this arrangement, to be convinced of its absurdity. The only advantage which it appears to possess is, that (in the absence of full reports of visits) the fortnight which intervenes allows the pupil to forget what he has heard, or perhaps prepares his mind for the reception of *new information*. This may probably be denied by those who imagine that clinical surgical instruction consists in telling the pupil that a leg is cut off because it must be cut off; but if the object of clinical instruction be to explain to the pupil the causes of the phenomena which disease presents, to enable him to distinguish cause from effect, and to trace the latter to its source; if it be the object of clinical instruction to point out the means by which morbid action may be altered, and in what manner such alteration

is produced, to explain the reasons why one remedy of a particular class is preferable to another, or why an operation may or may not be performed with a hope of success, then will it also be evident that connection is not less important to the clinical student, than it is to him who has just commenced the study of the elements of medicine. I shall now allude to the circumstance connected with clinical instruction, which appears to favour the idea of the patients' comfort being involved, viz. to the reports made at visits. In the present state of things, the practitioner proposes a series of questions to his patient, to which of course he receives answers, and whilst doing so the bed of the patient is surrounded (or partially so) by pupils. Now if one of the individuals present notes down the answers, I am quite at a loss to understand how such a proceeding can in any way injure the patient, although it is obvious that such notes would be highly useful both to the practitioner and pupil, and must in my humble opinion form the base of the lectures subsequently delivered. In fine, until some better arguments can be brought forward to justify such defective execution of the important duties of hospital physicians and surgeons, it appears that such medical officers should either fully perform the honourable and responsible task imposed upon them, or that the governors of such institutions make it a *sine qua non* in all future appointments.

It is generally admitted that it is easy to find fault with that which already exists, and that this may be done by persons incapable of either suggesting or executing any thing so good. Now, sir, in the present case, I imagine that the disease being exposed to view, and not being characterized by any symptoms indicative of absolute and intractable organic lesion, and although it may to a certain degree have assumed the chronic form, it seems to me not to require any very profound knowledge either of pathology or therapeutics to ensure a successful termination of the case. The disease then being *functional* rather than organic, there appears no necessity either for excision or amputation. Let us then consider by what means we may best obviate this functional derangement. The principal indication appears to be to overcome, in the first instance, a slight degree of congestion, and the second is obviously to be fulfilled by the judicious exhibition of stimulants. To speak seriously, that which I have termed congestion is prejudice, which too frequently induces those who entertain it to regard every thing new as an innovation. That it is often difficult to overcome prejudice every one must admit. But let this once be effected and we have not much to contend against. For a stimulus to increased exertions, the medical officers of the Newcastle Infirmary have only to look around them at other provincial hospitals, to find that they have been outstripped in the

race, the termination of which is professional fame and increased public confidence.

I remain, Sir,

Your most obedient servant,

GEORGE FIFE.

January 29, 1836.

54, Eldon-street, Newcastle-upon-Tyne.

A NEW PRACTICAL FORMULARY

OF HOSPITALS, OR A

Collection of Formulæ of the Civil and Military Hospitals of France, Germany, Italy, Great Britain and Ireland, &c., containing the Indication of the Doses in which simple Substances, magistral and officinal Preparations of the Codex are administered, the use of New Medicines, and general receipts on the art of prescribing. By M. EDWARDS, M. D., and P. VAVASSEUR, M. D., of the Hospitals of Paris—1834. Translated and augmented by M. RYAN, M. D. &c. &c.

(Continued from p. 820, Vol. VI.)

TURPENTINE.

A very powerful stimulant, which, besides its action on the general economy, exerts a special influence on the genito-urinary organs and mucous membranes. It is employed with advantage in the advanced stage of catarrh of the bladder, and in other diseases of the urinary apparatus, in chronic pulmonary catarrh, mucous diarrhoea, gout and rheumatism, &c. It is applied externally to wounds and ulcers.

INTERNALLY. Gr. x—3j two or three times a day, in pills or emulsion.

Terebinthinate Emulsion. H. of Mont.

Rx. Terebinthinæ chiæ,
Sp. vin. lavatæ, ʒ iss;
Vitell. ovi unius.

Misce et adde gradatim.

Aquæ menthæ, ʒ xij.

The dose is ʒ ss—j, in a glass of sugar and water fasting, or two or three hours after dinner.

It is used with benefit in diseases of the kidney or bladder.

Astringent Mixture. H. of Germ.

Rx. Terebinthinæ chiæ,
Balsami copaibæ,
Olei succini, āā ʒ iv.

The dose is from mxxx—3j three or four times a day. In certain cases of nocturnal pollutions and blennorrhagia. [The counter-irritation or induction of a new action in the genito-urinary organs will be advantageous, provided the usual malpractice is avoided. T.]

Pills of Turpentine. H. of Lyons.

Rx. Terebinthinæ, ʒ j;
Extracti rhei, ʒ iss;
Camphoræ, ʒ j.

Fiat massa in pilulas gr. iv, dividenda quarum deglutiat tres ter in die.

In leucorrhœa and blennorrhagia.

[Pills of Turpentine with Rhubarb. (Cline.)

Rx. Terebinthinæ, 3 ij;
Pulveris rhei, 3 j.

Divide in pilulas xxxvj, capiat seger, iij
his indie.

In blenorragia, gleet (blenorrhœa), and dis-
eases of the prostate gland.

[Turpentine and lytta are combined in
appropriate doses in cases of impotence,
catarrh, and paralysis of the bladder, and
leucorrhœa. T.]

Anthelmintic Pills. H. of Germ.

Rx. Terebinthinæ, 3 j;
Resinæ jalapæ, 3 ss;
Ext. hyosciami, gr. iv;
Hyd. submur. gr. viij.

Distribue in pilulas xij—dentur iv tertiis
horis.

In tape-worm.

EXTERNALLY. In clysters—3 i—iv. It
is also applied to wounds and ulcers; [but
generally with bad effects. It is a popular
practice to apply Venice turpentine to re-
cent wounds and ulcers in this country; but
its stimulating power aggravates these dis-
eases. If used in cases of long standing or
chronic ulcerations, the remedy is often be-
neficial, provided it is ordered by medical
practitioners, who alone can select the pro-
per cases. T.]

Resolvent Mixture. (Durande.)

Rx. Essentia terebinth., 3 ss;
Sp. ætheris sulphur, 3 ias.

Dose mxx—3 j in whey, in cases of bili-
ary calculi or gall-stones and hepatic colic.

[Biliary calculi or gall-stones cause in-
tense pain and spasm, which the sedative
preparations of opium or other narcotics
may relieve; but all solvent remedies are
perfectly useless, as they cannot pass from
the duodenum into the gall ducts. I have
lately had a female patient under my care
at the Western Dispensary, who was labour-
ing under this disease, and suffered from ex-
cruciating agony, though all the usual re-
medies were freely employed. She went
into the country, was recommended mustard
seed, took it in tea-spoonful doses several
times a day, and after some time passed,
according to her statement, at least a hun-
dred gall-stones. She did not preserve one
of them; she ascribed her cure to the mus-
tard seed, in the presence of several students,
though her remedy could not have had any
beneficial effect. Hoffman states, in his
Practice of Medicine, that gall-stones may
be evacuated in great numbers, and that
they have been set in rings and signets.
They have passed into the transverse colon
and peritoneum, and often destroy life.
There is no remedy which can dissolve or
dislodge them. A lady aged 25 years, a
patient of mine, passed a vast number of
them by the bowels, and a sandy substance
of the same colour from the bladder. Cases
are on record in which these substances were
evacuated through the anterior parietes of
the abdomen. T.]

The terebinthinate enema is used in this
country and on the Continent of Europe in
tympanites, lumbago, and ascarides.

Terebinthinate Clyster. H. of Germ.

Rx. Terebinthinæ, 3 j.

Tere cum vitello ovi et adde,

Theriacæ, 3 iv;

Lactis calidi, 3 iv.

Van Swieten employed this lavement to
allay colic and tenesmus which accompany
colliquotive diarrhœa in phthical subjects.

ESSENTIAL OIL OF TURPENTINE.

A purgative in large doses, in small
doses the same as the last remedy. It is
employed with advantage in the treatment
of neuralgia and debility of the genito-uri-
nary organs. It is also used in tœnia. Ex-
ternally it is employed as a stimulant in
neuralgia, lumbago, sciatica, chronic tu-
mours and ulcers, &c.

[It is a stimulant, cathartic, diuretic, an-
thelmintic, astringent in small doses, and a
rubefacient. It has been used with good
effect in epilepsy, in rheumatism, gout, and
sciatica (Geo. Cheyne), in gout of the sto-
mach (Mason Good), in puerperal fever
(Brenan), in iritis (Hugh Carmichael), in
yellow fever (Chapman), in numerous dis-
eases (Copland), in burns, purpura hæmorr-
hagica (Whitlock Nichol), to suppress mer-
curial ptyalism (Geddings), to allay nausea
and vomiting in the first months of preg-
nancy (Dewees), in epilepsy, tympanites in
the last stage of fever and in hysteria, in the
low delirium of fever, accompanied by a
congested state of the intestinal mucous
membrane, in convulsions caused by intes-
tinal irritation in infants (Graves' Lond. Med.
and Sur. Journ., vols. ii and iii, 1832-33),
in pulmonary complaints as a rubifacient in
adults and children, in pneumonia, pleuritis,
bronchitis, hooping cough, asthma, croup,
phthisis, &c. (Little—Dublin Med. Journ.,
v. 5, 1834), while I have substituted warm
oil of turpentine during the last seven
years for blisters in all deep seated inflam-
mations in the head, chest, or abdomen,
because too much time was lost in such
diseases in waiting twelve or twenty-four
hours, for the doubtful effect of blisters,
which, from adulteration, very often fail.
In cerebritis, hydrocephalus, pneumonia,
enteritis, peritonitis, hepatitis, &c. &c., the
idea of waiting several hours for the counter-
irritating effects of a blister, appeared to me an
extremely inert and unjustifiable practice,
for in such cases the sooner counter-irritation
is effected the better. I have already re-
commended this practice in mine, the last
edition, of Hooper's Physicians' Vademecum,
1833, and I have inculcated the propriety of
employing the remedy in my lectures on
the practice of medicine since 1828—a fact
known to at least five hundred students,
many of whom are qualified practitioners.
Dr. Copland claims the merit of having
first used and recommended oil of turpen-
tine both internally and externally in near

ly all the diseases mentioned in this parenthesis; but I, for one, was not aware of it. The learned author of the Dictionary of Practical Medicine published a paper on the use of oil of turpentine some years since in the London Medical and Physical Journal; but there are many diseases now enumerated omitted in that essay. He, undoubtedly, was one of the first, if not the very first British writer, who introduced the remedy under consideration to the notice of the profession in a vast number of diseases; but certainly not in all, in which it is now so beneficially employed. He has also the merit of having proposed the addition of tincture of capsicum to correct the nauseating effects of oil of turpentine on the stomach. Perhaps the best mode of exhibiting this medicine is in emulsion with mucilage and yolk of egg. T.]

INTERNALLY. As a general stimulant, ℞—xv in honey or emulsion.

As an anti-neuralgic, from 3ss—j in divided doses.

As an anthelmintic or cathartic, from 3s—ij in emulsion, combined with castor oil or in sweetened milk.

Terebinthine Mixture. H. Dieu.

℞. Olei terebinthinæ, 3ij;
Mellis rosæ, 3iv.

The dose is a table-spoonful three times a-day.

Employed by M. Recamier in the different forms of neuralgia. The disagreeable effects of this mixture are obviated by the following:

Terebinthine Looch. H. Dieu.

℞. Olei terebinthinæ, 3iij;
Syrupi menthæ, 3ij;
——aurantii,
——ætheris, āā 3j;
Tincturæ canellæ, 3ss;
Vitellum, ovi, j.

Dosis 3ss. ter in die.

When this medicine induces vomiting, a drachm of laudanum is added.

Anthelmintic Draught. (Cadet).

℞. Olei terebinthinæ, 3ij;
Mellis despumati, 3vj;
Aque menthæ, 3iij.

This is divided into three doses, to be taken in one day, in cases of tapeworm.

[Dr. Brenan prescribed 3ss—3ij in what he termed puerperal fever; and Dr. Payne, of Nottingham, writes most favourably of its efficacy. In my opinion both employed it in puerperal peritonitis, and not in uterine phlebitis, which is malignant puerperal fever (Tonnellé, Dance, Lee, &c.), in which calomel used in scruple doses combined with morphia and camphor administered every hour, with free mercurial unction of the axillæ and groins, are the only effectual remedies. Oil of turpentine, 3ij—iv with 3iv and 3j of castor oil in the form of emulsion composed of yolk of egg and mucilage of acacia, is the best remedy in peritonitis, but is ineffectual in malignant puerperal

fever, so far as my observation extends. The external use of warm turpentine as a counter-irritant in abdominal or uterine inflammation is extremely valuable. The medicine should be warmed, and rubbed with a piece of flannel over a small portion of the skin, which will be irritated in a minute or two, and then the medicine ought to be discontinued. T.]

Terebinthine Clyster. H. Dieu.

℞. Olei terebinthinæ, 3j;
Vitellum ovi, 3j;
Decocti papaveris, 3viij.

In lumbar neuralgia and ascarides.

Terebinthine Linct. H. Dieu.

℞. Olei terebinthinæ, 3j;
——camomeli, 3ij;
Tinct. opii, 3j.

In cases of neuralgia in which the sufferers cannot bear the internal use of turpentine.

Anticonvulsive Mixture. (Gravès.)

℞. Olei terebinthinæ, 3j;
——ricini, 3iv;
Syrupi papav. alb., 3j;
Mucilaginis acaciæ,
Aque fœniculi, āā 3ij;

Dosis 3j tertiis horis.

In convulsions of infants from three months upwards, when caused by intestinal irritation, or congestion of the gastro-intestinal membrane.

[I have lately had a case of sciatica under my care at the Hospital which was supposed to be caused by neuritis, but it yielded to the internal use of turpentine, after the ordinary remedies had failed. Several gentlemen now attending the medical practice of the institution witnessed this case.

Dr. Edwards and Dr. Vavasseur describe Burgundy and black pitch as external applications, but they are so well known that they need not be introduced. T.]

Antistatalagogue Gargle. (Geddings.)

℞. Mucilaginis acaciæ, 3viij;
Olei terebinthinæ, 3ij.

[I have found this very effectual, but it may fail. T.]

BALSAM OF COPAIBA.

A very energetic stimulant, which acts chiefly on the mucous membranes. It is used with advantage in chronic catarrhs, and certain affections, not inflammatory, of the lungs. Its most common use is in gonorrhœa. It is administered in obstinate leucorrhœa, watery diarrhœa, caused by atony of the intestines, &c.

INTERNALLY. Gut. x ad xx, as a stimulant, two or three times a day, with sugar, or in an emulsive potion.

3ij ad iv, and even more, progressively, in gonorrhœa, leucorrhœa, &c., either in a potion or in pill.

Astringent Potion of Chopart.

Rx. Balsami copaibæ,
Aque destillatæ menthæ,
Alcoholis,
Syrupi capilli veneris, ā ā ʒ ij;
Aque aurantii, ʒ j;
Acidi nitrici, ʒ ij.

Fiat mistura ejus sumat cochl. mag. ter in die.

Much used in the treatment of gonorrhœa.

The *Potion de copahu composée* of the H. de la Ch. differs only from the preceding, in containing two ounces of orange-flower water.

The *Potion astringente* of the H. de Ven, differs more from that of Chopart than the preceding one, but acts in a similar manner. It is composed of mint water, orange-flower water, syrup of marshmallows, and of the balsam of copaiba, ā ā sixteen parts; of gum arabic and nitric acid, ā ā one part.

Balsamic Potion of Fuller.

Rx. Balsam. copaibæ,
Syrupi toluiferæ, ā ā ʒ ij;
Vitelli ovi, No. j;
Vini albi, ʒ iv.

Fiat mistura de qua capiat cochlearia tria magna in die.

In the same cases as the preceding mixtures.

Syrup of the Balsam of Copaiba. H. of Ger.

Rx. Mucilaginis gummi acaciæ, q. s.;
tere cum,
Balsami copaibæ, ʒ j ss,
Adde gradatim,
Syrupi, simplicis, ʒ xvij.

Fiat syrupus ejus sumat æger cochl. min. quater in die.

In gonorrhœa and chronic diseases of the chest.

Pills used in Bleorrhœgia. Hôt. D.

Rx. Balsami copaibæ, ʒ ij;
Hydrargyri submuriatis, gr. xvij;
Sanguinis draconis, ʒ j;
Conservæ rosæ, ʒ j.

Divide in pilulas granorum, vi; quarum, ij; vel, iij; capiendæ mane nocte quæ.

Antigonorrhœal Pills. H. of Germ.

Rx. Balsami copaibæ,
Magnesiæ, ā ā p. e.

Distribue in pilulas granorum x; e quibus capiat, ij; vel, iv; ter in die.

Antigonorrhœal Boluses. H. Militaires.

Rx. Balsami copaibæ,
Conservæ rosæ,
Pulveris glycyrrhizæ, ā ā ʒ j.

In bolos sex divide quorum, ij; vel, iij; capiendi quotidie.

The *Bols astringent* of the H. des Vén do not differ much from the preceding ones. They are composed of— ʒ ij of the balsam copaiba, ʒ j of gum arabic, and a sufficient quantity of pulverized liquorice. This mass is divided into xx boluses, of which half are

taken in the morning, and the other part in the evening, in chronic gonorrhœa.

Balsamic Boluses. H. of Italy.

Rx. Balsami copaibæ,
Pulveris gentianæ, ʒ j;
— zedoariæ, āā gr. xx;
Syrupi simplicis, q. s.

Misce.

Divide in bolos xvij, e quibus duo sumendi ter in die.

In treating gonorrhœa, &c.

Antigonorrhœal Opiate. (Swediaur).

Rx. Mucilaginis gummi acaciæ, q. s.
Balsami copaibæ, ʒ vi;
Sacchari, ʒ vi;
Syrupi simplicis, q. s.

Misce.

Cochlearia duo vel quatuor adhibenda mane nocteque.

Anthelmintic Mixture. H. of America.

Rx. Balsami copaibæ, ʒ ij;
Sodæ subcarbonatis, ʒ j;
Tincturæ opii, gut. lx;
Emulsionis simplicis, ʒ iv.

Fiat mistura, ejus sumat cochleare magnum, tertiâ vel quarta horâ.

In vermicular affections.

EXTERNALLY.

Enema of the Balsam of Copaiba. H. de Perfect.

Rx. Balsami copaibæ, ʒ iv;
Misce cum vitello ovi et adde,
Camphoræ, gr. iv;
Extracti opii, gr. j;
Aque gummi, ʒ iv.

Fiat enema.

Employed with advantage to stop gonorrhœal discharges, either acute or chronic.

Balsam Injection. H. of Germ.

Rx. Balsami copaibæ, ʒ iv;
Vitelli oni, q. s.;
Aque calcis, ʒ vj;
Mellis rosæ, ʒ iij.

Fiat injectio.

Used in the treatment of fistulous ulcers.

BALSAM OF PERU.

An energetic stimulant, employed in chronic pulmonary catarrh and phthisis. It is used in the same diseases as the resins of which we are about to speak.

INTERNALLY. Gr. xij; ʒ j; in pills or emulsion.

Mixture of Werlhof.

Rx. Balsam. Peruv. ʒ ij;
Vitell. ovorum, ij;
Tere simul et adde,
Extracti cinchonæ, ʒ iv;
Mellis rosæ, ʒ vj;

Dosis, ʒ ss ter in die.

In chronic pulmonary catarrh.

Balsamic Emulsion. H. of Germ.

Rx. Balsam Peruvian., 3j;
 Olei amygdalar., 3iss;
 Pulveris acaciæ, 3ij;
 Tere simul et adde,
 Aquæ rosæ, 3j.
 Sumat dimidiam, bis in die.

Balsamic Looch. H. of Germ.

Rx. Balsam. Peruv., 3j;
 Spermat. ceti, 3ij;
 Solve in vitello ovi et adde,
 Syrupi acaciæ, 3ij.
 Dosis 3ss. 3, 4, in die.

Acoustic Injection. (Alibert.)

Rx. Balsam. Peruv. 3ij;
 Tinet. moschi, m iv;
 Essentiæ rosæ, m j;
 Decocti hyperici perf. 3xx.

Injiciatur in aurem, q. s. hujus bis in die.

In deafness.

(Another.)

[Rx. Fellis bovis, 3iij;
 Balsam Peruv., 3j.

Hujus liquoris, quantum cavi, capi potest injiciatur in aurem affectam supinam; ac detineatur aliquot minuta, dein aure prona rursus emittatur: iteretur operatio bis vel ter in die.

In foetid purulent discharges from the ear. T.]

BALSAM OF TOLU.

A powerful stimulant like the last. It is employed in similar cases, but more frequently. It is also used to perfume pectoral and tonic medicines.

INTERNALLY. Gr. x—3ss, in pills, electuary, or in emulsion.

Tincture. P. 3i—ij.

Syrup. P. 3ij—3j in a draught.

Balsamic Mixture. H. of Italy.

Rx. Syrupi tolutani, 3j;
 Mucilag. acaciæ, 3viij;
 Olei amygdalarum, 3iss.

Dosis, 4ta pars bis vel ter de die.

In pulmonary catarrh, blennorrhœa (gleet) blennorrhagia (gonorrhœa).

BALSAM OF MECCA.

This is similar to the preceding, and is seldom employed.

Astringent Pills.

Rx. Balsam Meccæ, m. viij;
 Opti pulveris, gr. j;
 Terebinthinæ chiæ, q. s.

In pilulas duas forma, capiat unam mane nocteque.

In leucorrhœa and blennorrhœa.

MYRRH.

In small doses stomachic and tonic; in large doses a powerful stimulant. It is employed in chlorosis, atonic affections of the digestive organs, pulmonary catarrh, &c.

It is generally united with tonics and chalybeates. Externally it is used in gangrenous angina, in chronic ulcers, in scorbutic relaxation of the gums, and caries of the bones.

INTERNALLY. In powder. Gr. x—3j.

Watery extract. Gr. v—x in pills.

Tincture. P. mxx—xxx in a draught.

Compound Powder of Myrrh. H. of Germ.

Rx. Myrrhæ pulv.,
 Opoponacis, aa 3ij;
 Sagapeni,
 Castorei, aa 3j;
 Olei menth. pip.,
 —rutæ, aa q. s.

In chartulas xxxvj divide, ex quibus capiat unam mane vespereque.

Emmenagogue.

Pills of Myrrh and Henbane.

Rx. Extracti myrrhæ, 3iss;
 —hyosciami,
 Pulveris scillæ, aa 3ss;
 Aquæ, q. s.

Fiat massa in pilulas xxx dividenda, quarum capiat æger duas vel tres quotidie.

[Some British practitioners employ these pills to promote expectoration in chronic pulmonary catarrh. T.]

Detersive Injection. H. of Italy.

Rx. Decoti hordei, Oij;
 Tincturæ myrrhæ, 3j.

In chronic coryza, accompanied by an abundant discharge of mucus from the frontal sinus; chronic ulcerations of the bladder, obstinate gonorrhœa. In the last disease, 3j of acetate of lead, and 3ss of opium is added to 3viij.

Ointment of Myrrh. H. of Germ.

Rx. Pulveris myrrhæ,
 Spermat. ceti, aa 3ij;
 Vitellos ovorum, No. ij;
 Butyri recentis, 3ij;
 Balsam Peruv., 3ss.

This ointment is employed by the German physicians with a view to remove the cicatrices or scars caused by smallpox.

[The preparation of myrrh prescribed by the pharmacopœias of this kingdom are valuable remedies in the diseases for which they are ordered. T.]

(To be continued.)

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Rebickins.

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The Dublin Journal of Medical and Chemical Science, exhibiting a Comprehensive View of Medicine, Surgery, Chemistry, and the Collateral Sciences. No. XVIII. Vol. VI. January, 1835.

THE present number of the periodical before us contains six original communications, three reviews, and the usual quantity of scientific miscellaneous matter. The

first paper is by our valued correspondent, Mr. Ingleby, of Birmingham, entitled, *Illustrations in Midwifery, embracing the Obscure Characters of Pregnancy, the Signs of Death of the Ovum.* The paper is presented through Dr. Montgomery, who has written so ably on the subject. The author divides his remarks into fourteen sections, and has very ably described the difficult diagnosis of utero-gestation in many cases in which the symptoms are obscure. His communication occupies thirty-five pages. Want of space prevents us from noticing this elaborate paper.

The second article is on the *Theoretical Constitution of the Ethers*, by R. J. Kane, Esq. The object of the writer is to shew that he had anticipated Berzelius and Leibig in discovering the constitution of the ethers. He published his views in our *Dublin Contemporary*, Jan. 1833, vol. ii. Berzelius published in the same year, and Leibig in Feb. 1834. Mr. K. republishes his original paper, which we brought before our readers at the period of its original publication.

The next paper is by Dr. Griffin—What are the Principles which should be kept in View in the Treatment of Enteritis? The author cites many standard works, and has compiled a good practical paper.

Dr. Churchill has contributed some interesting cases of uterine inflammation.

Dr. Mateer follows with observations on the injurious effects of salt on the animal system. The author thinks it a frequent cause of diseases in the viscera of the chest and abdomen, adduces sea-scurvy and purpura hæmorrhagia in illustration of his doctrine; and, according to the editor, the profession in Dublin entertain the same opinions. We cannot, however, help remarking, that the attributing the dyspeptic and abdominal disorders of the poor to the excessive use of salt is a position which few will grant. We are ready to admit that the excessive use of salt will produce a debilitated state of the body, but not a moderate use of it.

The last paper is the history of a case of *Cæsarean section* in consequence of the presence of an abdominal tumour, by Dr. Montgomery. This is an instructive case, and we shall notice it fully at an early opportunity.

An Exposition of the Nature, Treatment, and Prevention of continued Fever. By Henry M'Cormac, M.D., Belfast. 8vo., pp. 202. London, Longman and Co. 1835.

THE author informs us that he has observed fevers in different quarters of the globe, and has been physician to a fever hospital and dispensary for some years. His object is to add his contributions to the annals of medicine. He has quoted a vast number of the eminent writers on fever of the last and present century, arranged their opinions in regular order, and on the whole amassed all the information which is known upon the subject. We strongly recommend this work to our readers. It contains a vast deal of knowledge in a condensed yet comprehensive form. We shall perhaps at some future time enable our readers to judge of the merits of this production.

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The London Medical

AND

Surgical Journal.

Saturday, February 7th, 1835.

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IMPORTANCE OF OBSTETRICS—CULPABILITY OF IGNORANCE IN THIS DEPARTMENT.

THERE is no department of the healing art which requires a greater extent of scientific knowledge than midwifery; none which affords a wider range of phenomena for the deduction of pathological principles, or more frequent opportunities for their application; and none which better exercises the sagacity, firmness, and presence of mind characteristic of an able practitioner. Without a sufficient acquaintance with this branch, no physician or surgeon can be properly qualified for the practice of his profession. How, for instance, is the physician to deal with disorders connected with the gravid and puerperal states, if he be not familiar with the physiological peculiarities of these states, and their influence on the phenomena of disease? How is the surgeon to form a judgment on many obscure cases of abdominal dis-

case which simulate pregnancy, unless he be familiar, by constant habit, with the signs diagnostic of the latter? It will, perhaps, be answered, that in doubtful cases other practitioners well skilled in obstetrics may be called into consultation. But on this we would observe, that there is frequently no doubt in the mind of the uninformed practitioner till it becomes clear to himself and everybody else that he has committed an egregious blunder, which may be farcical or tragical, according to circumstances. For example, a *well-marked* case of peritonitis resolves itself into one of parturition, and the embodied phlegmasia comes forth in semblance of a lusty boy, roaring "blockhead" in the ears of the astounded son of Æsculapius! This would be nothing but an excellent joke, allusions to which, however, might not be particularly gratifying to the Doctor; but suppose another case—a surgeon performs the operation of *paracentesis abdominis*, and thrusts his trocar into the contents of a gravid uterus, thus, very probably, sacrificing two lives at once to his own criminal incapacity; this is not an imaginary occurrence—it has actually taken place, and is only mentioned here as one of the many instances in which the obstetrical ignorance of a surgeon may prove fatal to his patient. But let us take the question as stated by the advocates of *subdivision*. The physician or surgeon ignorant of midwifery is invaded by timely misgivings, and calls a professed obstetrician to his aid; if the latter be a well-informed man, conversant with every branch of medicine, his interference may be highly advantageous to the patient, while the necessity for it must reflect severely on the incompetency of his *confrere*; but if the obstetrician be as exclusive in his own branch as the other practitioner is in his, what sort of judgment or practice is likely to spring from this coalition of mutual ignorance?

Again, let us suppose the anti-obstetrical doctor or surgeon placed in a situation where no accoucheur is to be had; suppose, for instance, a woman to be taken in labour during a voyage, and her case to be such as absolutely to demand the interference of art; there is a physician or surgeon on board, who knows nothing of midwifery; well—this poor woman must die because there is no amphibious Doctor Slop resident in the midst of the Atlantic or Pacific! What would be the impression on the minds of all on board, if a medical practitioner, no matter of what denomination, was to decline interfering? Unquestionably that he was either an ignorant or a barbarian. What would be his own impression, if he undertook the case, and the patient died in consequence of his want of skill? Why, then he would indeed have the satisfaction of knowing that he had done his best; but he would also have the misery of knowing that the life of a fellow-creature had been lost through his own disgraceful ignorance. What a reflection for a man of "high moral feeling!" Yet, with such indisputable truths as these before their eyes, the Fellows of the London College of Physicians pretend to think the practice of midwifery degrading to themselves, however eligible it be for *licentiates*—who, of course, stand so low that further degradation is impossible. The pure surgeons are of the same mind: they leave midwifery to subordinates, who are already contaminated by a knowledge of physic. We beg to be understood as speaking generically, not individually; we hope and believe that there are many, in each of these classes, too enlightened and too conscientious to give in to so stupid and inhuman a prejudice.

But, after all, what is the real secret of the contempt which the *fellows* and the *pures* bear to midwifery? We will illustrate the matter by a reference to a parallel case in history. In the darkest

of the dark ages, men of rank thought it beneath them ever to put pen to paper; they would not even sign their names to any document whatsoever. Why? Because they could not write, and were too lazy to learn. We leave it to the reader's sagacity to make the application to the modern aristocracy of our profession.

Degrading! It is no degradation to the *fellow* to dance attendance on the silliest whims of a fanciful coxcomb; it is no degradation to condole with a wealthy glutton on the effects of his brutal intemperance; but it is a degradation to watch over the safety of the most interesting part of the creation, at a time always of severe suffering, and occasionally of great danger—if it be so, may we ever remain among the dishonoured!

We by no means wish to contend against the utility of certain practitioners addioting themselves more especially to midwifery; but we do contend that every practitioner who means to understand his profession, must, in the early part of his career, attend sufficiently to the study and practice of this department, to place at his command the extensive materials for scientific reasoning which it affords, and to render him fit for the conduct of such obstetrical cases as may unexpectedly fall in his way.

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THE PORTSMOUTH CHOLERA GAZETTE.

THE laceration which we lately inflicted on the voracious chronicler of cholera at Portsmouth, a disease which never existed there at the period alleged, has led our opponents, under their writhings, to occupy seven pages of their splendid production in a low vulgar tirade of personalities against the Editor of this Journal. This scurrility is beneath notice. Every man of education and gentlemanly habits will despise it. But amidst this heap of rubbish, is a reiteration of a number of unblushing falsehoods, with respect to the late proprietorship of this Journal; and these we must refute for the tenth time. When men are so unprincipled as to publish falsehoods again and again, they might impose on some, who may accidentally see their assertions for the first time, more especially when their vehicle of slan-

der is distributed among several members of the profession, who never look at it or peruse it, unless sent gratuitously. It is for this reason only that we reply; because our personal feeling towards such retailers of falsehoods compels us to look upon them with contemptuous indifference. We laugh at and pity their personalities. The unfortunate hirelings who do the dirty work of the Portsmouth Cholera Gazette, and who are so unknown and insignificant as to conceal their names, a subterfuge always adopted by persons who are fearful of consequences, unblushingly assert that Dr. Ryan was not the original proprietor of the London Medical and Surgical Journal. We have already proved this was an impudent, bare-faced falsehood. Two of "the literary scavengers," as well as the writer of the article, who were employed by Dr. Ryan and his pupils last year, as reporters, well know the above assertion to be a lie. Behold the proofs!

It is well known to the reading part of the profession, that Dr. Ryan edited the London Medical and Surgical Journal, of which he was proprietor from 1829 to 1831, during which period, Mr. Renshaw was then clerk or shopman, and Mr. Rush apprentice to Mr. Underwood, late medical bookseller in Fleet Street. When Renshaw and Rush commenced business in the latter end of 1831, they had no more claim to, or connexion with this Journal, than "the man in the moon!" Dr. Ryan appointed them his publishers, though a bookseller, infinitely better known, and infinitely more respectable than they, repeatedly solicited the office. But reasons which need not be stated, induced Dr. Ryan to employ Messrs. Renshaw and Rush. He admitted them partners, in 1832, and now they have the unparalleled impudence to command their penny-a-line men to write—they were the original proprietors of this Journal—and designate this, the original, a pseudo journal. Dr. Graves and Dr. Stokes are also of this opinion, because Mr. Swift, their reporter, (who spent hours, on different days, with Dr. Ryan's near relatives in Dublin, in advising them of all things to induce Dr. R. to "cut Renshaw and Rush's connexion, for the Journal could never succeed while they had any thing to do with it," and wrote to the same effect,) thought he would make more money of said Renshaw and Rush, than of Dr. Ryan. Drs. Graves and Stokes had not penetration enough to appreciate Mr. Swift's motives, and were imposed on. Both Drs. Graves and Stokes repeatedly wrote to Dr. Ryan, to increase this person's pay, and when he remonstrated, and said that he fulfilled his agreement with him, and could get others in his place—their answer was—"no one else shall report from the Meath Hospital;—that is to say, "you must increase his pay."

But another cause of mortal offence giv-

by Dr. R. to some of our Dublin contemporaries, was his exposing the delinquencies of the Dublin Colleges and Hospitals, the Meath Hospital included, as he did of the British institutions before the Parliamentary Committee, of which Mr. Warburton was chairman, and his refusal to defend them in this Journal. He refused to defend the gross jobbing, the purchase of professorships and physicianships, the exclusion of talent on account of religious persuasion, in the benighted and unfortunate city of Dublin*. The Portsmouth Cholera Gazette folks, after a vast deal of circumlocution and unnecessary verbiage, after the manner of lawyers, call on us to shew the MS. of Drs. Graves' and Stokes' lectures. We shall have great pleasure to shew them to any respectable member of the profession in the United Kingdom, who calls on us any morning before 12 o'clock. That's our answer†. That Dr. Stokes' lectures, as supplied us, were the worst we ever perused, is most true, but we have already observed, whether the fault was the Doctor's or the reporter's, we neither knew nor cared—we certainly did not render them into sense or English as we did his former ones—an act which our red ink corrections in the MS., and our printers, attest. But the Doctor has modestly accused us of fabricating his lectures, and is astonished how any Editor could publish such. We beg to inform him that Editors too often publish a vast deal of nonsense delivered by lecturers, more especially when they do not chuse to correct it; and farther, that Dr. Ryan is ready to leave to the judgment of the profession, his description of Auscultation, Percussion, Succussion, and Mensuration, in his edition of Dr. Hooper's Physician's Vademecum, 1838, with any that Dr. Stokes has hitherto published, or shall hereafter publish on the subjects. There is also another fact worthy of the Doctor's remembrance, namely, that none of Dr. Ryan's works has hitherto been damned, as was Dr. Stokes' on the Stethoscope, Auscultation, &c. (Vide Lancet, Medico-Chirurgical Review, Edinburgh Medical and Surgical, &c., &c.)‡

* In London no man is impeded in his profession or calling on account of his religion. In Dublin every impediment is thrown in his way, unless he professes a certain creed, though he may in reality follow which he pleases.

† Our terrified unknown, but our now known friend, who is resident in London, need not entertain any fear that we shall allow improper or interested persons to see his manuscript—To them he shall continue unknown.

‡ It is to us astonishing that Dr. Stokes could seriously suppose, the Editor of this onary journal could be so insane as to compose or fabricate his lectures delivered at the Meath Hospital, containing long histories

As to the personal scurrility of the Portsmouth Cholera Gazette people, with respect to our friend's sporting "a fine bushy, flame-coloured top-knot, &c., &c.," this is too peurile to be noticed. But we may be allowed one remark—It is most true that Nature has given our friend a luxurious capillary growth, that he is a rough-headed Irishman, as a quondam vanquished opponent once designated him, or has what physiologists consider a proof of a good supply of blood to the head, a characteristic of a sanguine temperament, of a *mens sana in corpore sano*. We thank our cholera friends for this quotation, but we are not surprised that youths who are scantily supplied with this sign of vigorous development, having a few stems of lanky growth, and who are obliged to wear scalps, for "those who have no hair, may lawfully wear a wig." should envy our worthy friend of "Dame Natures" luxuriant embellishment. These imberbous youths, the commissioners from St. Thomas's Hospital, talk of withered branches, &c.—but if they looked near home, perhaps they might discover, whether effeminacy, pusillanimity, and a premature decay of mind and body, are not their own unfortunate characteristics. In fine, we have to remark that the Portsmouth Cholera Gazette, containing attacks on Dr. Ryan, has been distributed under cover (for no one takes it) among many members of the profession; and the proprietor is so clear sighted as not to perceive, that the vituperation of our friend is the best course he could pursue to excite the hostility of the profession. Neither can he see that the tirades in his pamphlet, are (*vox et præterea nihil*.)

Mr. Williams' Letter.

The pointless remarks on Mr. Williams's letter in the Portsmouth Cholera Gazette, merely shew the excruciating agonies of the worthies he so justly castigated. That gentleman, after an experience of thirty years in public service, can bear another "contemptible piece of egotistical buffoonry"—from the commissioners!!! who intruded themselves, in his absence, into his hospital, made extracts from his private case books, published a comment on them, and afterwards made a most abject apology for libelling the government, which they accused of ordering prisoners to be kept "filthy and ill fed." We are not certain, indeed we

of cases treated by the Dr., which could not possibly be known to us. We were next accused of fabricating them from notes, &c. The manuscripts will shew, that contrary to our usual custom, we did not correct or alter a syllable in them. Our medical friends here, well know, that we are too much occupied even to compose or write out our own lectures every week, much less to sit down to "fabricate" the ideas in another man's cranium

know nothing of the fact, if fact it be, but it was announced in one of the papers of this day, that an individual very like in appearance one of the Portsmouth Commissioners, who passed the examinations at the Royal College of Surgeons and Apothecaries' Hall a few months ago has been appointed lecturer at the Westminster School of Medicine!! The cholera bulletin issued from that quarter—Now, if this were really the Portsmouth commissioner, we should ask Mr. Guthrie, who gave in evidence at the House of Commons that no man would be allowed by the College of Surgeons to lecture on anatomy, unless he had a museum that cost £1,000., &c. &c., how the appointment in the school to which he belongs, (indeed it could not have taken place with his consent and we don't think it possible that it has), could be made? The whole tenour of Mr. Guthrie's evidence went to prove that the Royal College of Surgeons were most tenacious in sanctioning lecturers; and he stated distinctly, that they should be men of standing in the profession and of known reputation. We therefore don't believe the announcement in the newspaper; but if it be true, then we shall expatiate upon Collegiate consistency—for Mr. Guthrie was the avowed organ as President of the College.

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Foreign Medicine.

Remarkable Cases of Hydrocephalus.

M. ESQUIROL informed the Academie de Medecine, at the sitting of the 20th January, that when visiting the Hospital Santa Maria Nuova, in Florence, the Zanetti shewed him the head of a hydrocephalic patient, the dimensions of which were enormous: he took a copy of it in wax, and now exhibited it to the Academy.

Millimetres.

The circumference of the head is	920
The distance from one auditory foramen to the other, passing over the vertex	720
The distance from the occipital protuberance to the root of the nose, passing by the vertex .	595
The Antero-posterior diameter .	270
The transverse diameter	260

The head was thickly covered with light-coloured hair; large veins were prominent in several portions of it, and particularly about the temples. The bones of the base of the skull exist, but those of the vertex do not. The encephalic cavity is formed by the scalp and meninges alone, and contained thirty-six pounds of fluid. The mass of the cerebral lobes had disappeared, or were rather expanded in a layer over the whole inner surface of the membranes: this layer was only between one and two lines in thickness. The corpus callosum, the thalami optici, and striated bodies were visible.

The subject of this case was a little girl, who died at the age of two years and a half: she was exceedingly emaciated, and her stature, as also her intellect, was that usual to children of her age.

M. Esquirol compared the dimensions of this child's head with those of the head, also watery, of an Englishman, who died in his 27th year, and whose case was published by Spurzheim. In this instance,

Millimetres.

The circumference of the head was	880
The Antero-posterior diameter . .	298
Distance from ear to ear, over the vertex	400

The learned member also shewed the Academy the head of a hydrocephalic foetus that had been grafted to the gastro-colic epiploon. The cranium was evidently ossified: the sternum, ribs, vertebræ, and membranes were easily recognized. The woman in whom M. Esquirol found this foetus was upwards of sixty years old, had always enjoyed good health, and was lusty: her abdomen was large, but free from pain: she had resided for several years in the Saltpetriere, where she died in 1820.—*Gazette Medicale*, Jan. 24.

Foreign Body introduced into the Rectum.

M. Thiaudiere relates the following curious case in the Bulletin de Therapeutique.

A young man of twenty-two years, in order to overcome an obstinate costiveness, on the 6th of last May introduced into his rectum a wooden hook, the long branch of which was five inches long, and the smaller one, which formed the hook, three inches and a half, including the extremity or point of union of both the branches, between which the distance at their nearest junction was an inch, and two at their greatest separation; each branch was four lines thick.

This hook had been introduced with the great extremity foremost, and when the small branch had fairly entered the rectum, the youth tried in vain to extract the fecal matters with it. Sharp pains came on. He tried to withdraw it but could not; he then pushed it further up imagining that it would be dissolved like aliment. Meantime the pains became dreadful.

On the 30th May, M. Thiaudiere first saw the patient. He found it barely possible to touch beyond the end of the longest branch, and as he could form no idea of the shape of the instrument, he desired the patient to shew him one like it. After a clyster, he then made the man rest with his hands on a chair, the legs and buttocks well separated. One finger after another, he gradually introduced the whole hand into the rectum: with infinite difficulty he contrived to seize hold of the smaller branch and disengage it from the folds of the intestine: then pressing the two branches together, he at once contracted the space they and his own hand

had occupied, and thus withdrew this novel species of corkscrew entire. He calls it a footling presentation!

No untoward symptoms followed, and the patient entirely recovered in a fortnight.

Influence of Age on the Height and Weight of Man.

Numerous researches lately made at Brussels into the height and weight of men and women lead to the following consequences:—

1. From birth there is a difference in weight and height between children of the two sexes; the medium weight of boys is 3,20 kilograms; of girls 2,91; the height of boys is 0,500 metres, (the French metre is 39 $\frac{1}{4}$ inches), and that of girls 0,490 m.

2. The weight of a child diminishes somewhat up to the third day after birth, and does not begin sensibly to increase until after the first week.

3. With equal age, a man is generally heavier than a woman; it is only towards the 12th year of age that individuals of either sex are of the same weight. Between the 1st and 11th year the difference of weight is from 1 kilogram to 1 $\frac{1}{2}$ kil. Between 16 and 20 it is about 6 kil., and after this date, from 8 to 9 kilog.

4. When a male or female has arrived at its full development, they weigh nearly 20 times more than at birth, and their height is only 8 $\frac{1}{2}$ times greater than at birth.

5. In old age both man and woman lose about from 6 to 7 kilograms of their weight, and 7 centimetres of their height.

6. During the development in both sexes the squares of the weights at different ages may be considered as in proportion with the 5th powers of the heights.

7. After complete development in both sexes the weights are nearly as the squares of the heights.

From the above it may be deduced that the increase in height is greater than the transverse growth, including the breadth and depth.

8. Man attains the maximum of his weight towards his 40th year, and begins to fail in it very sensibly towards his 60th.

9. Woman does not attain the maximum of her weight until nearly her 50th year. During the breeding period, that is from the 18th to the 40th year, the weight is scarcely observed to increase at all.

10. The weight of persons measured, and who were fully developed and regularly constructed, varies within points that are about as 1 to 2; whereas weight varies only within points that are at most not more than as 1 to 1 and a third.

11. With equal heights, woman weighs somewhat less than man previous to attaining the height of 1,3 metres, which nearly correspond to the age of puberty, and she weighs a little more if the height is greater.

12. The medium weight of an individual, leaving out of consideration both sex and age, is 44,7 kilog., and taking sex into account, it is 47 kil. in man, and 42,5 kil. in woman.

Similar results were obtained by the late M. Tenon in Paris and its neighbourhood. The experiments were made on persons in easy circumstances, who for the most part exceed the lower classes in height and weight.—*Gazette des Hôpitaux*.

State of Education in Russia.

The number of professors and employes of the University of St. Petersburg is 54; that of students 206. The university district of the same city is composed of eight gymnasia or preparatory schools, and 207 other establishments, with 417 teachers and 8,781 pupils of both sexes.

The University of Moscow reckons 113 professors and other officers, and 541 students. Since July, 1833, at the suggestion of the minister Ouwaroff, the professors publish memoirs, and the students are employed in the translation of the best foreign works.

Charkoff has 52 professors and 464 students. Included in this university are 7 gymnasia and 179 other establishments, with a congress of 515 professors and teachers and 10,267 pupils.

The University of Casan reckons 209 professors, and an equal number of students. They have for some time been teaching the Mongolian language here. Particular attention is given to meteorological, magnetic, and geographical observations. In the circle of this university are 8 gymnasia and 159 inferior schools: the total number of teachers is 501, and of pupils of both sexes, 7,776.

The University of Dorpat, composed of four Faculties previous to 1833, has 67 professors and teachers, and 539 students, most of whom come from the provinces of Livonia, Esthonia, and Courland. Here there are 4 gymnasia and 270 other establishments, with 260 professors, and 8,471 pupils of both sexes.

The University of Saint Wladimir recently founded at Kiew for the governments of Kiew, Padolia, and Volhynia, reckons in its circle 7 gymnasia and 54 other schools with 168 professors and employes, and 4,609 students. Besides the six scholastic districts which are connected with the six universities of Saint Petersburg, Moscow, Charkoff Casan, Dorpat, and Kiew, the ministers report also makes mention of four others recently organized. There are 1, of White Russia the head quarters of which are at Witepak (transferred from Wilna) with 9 gymnasia, 68 other schools, 423 masters and teachers, and 8,766 students of both sexes: 2 of Odessa, composed of 5 gymnasia, and 68 other schools, with 190 professors and

3,115 students. The latest established college is that of Kischekew in Bessarabia; the best is Lycée, Richelieu of Odessa which itself includes 44 teachers and 400 pupils; 8. the College of the Caucasus placed under the superintendence of the governor of Caucasasia and Georgia. It is intended to be composed of the College of Tiflis and of 20 schools of so many cantons: 12 are already organized: 4 and lastly, the College of Siberia.

We suspect that Russian schools and scholars, like Russian armies, are much more formidable on paper than on the ground—the Colleges of Caucasasia and of Siberia!! credat Judas! *As resiste* we can well imagine the species of education received under a mild rule which permits no exit from Russia to other Universities. It is plainly not an education which

“*emollit mores nec sinit esse ferus.*”

Bleeding in Lightning-stroke.

The St. Petersburg Medical Gazette states that a soldier who had been struck by lightning was saved by copious bleeding: he was buried up to the neck in the ground, and in five minutes sensibility was restored, although the body was perfectly cold when inhumed.

Abscess of the Scalp.—Purulent Absorption.

Cyprian Blanc, aged 25, a silk weaver, was brought to the Hôtel Dieu on the 24th of March, 1838. On his forehead was a deep round lacerated wound. Above the centre of the right eye-brow there is an opening one inch in extent, in a transverse direction, and having the appearance of a wound produced by a cutting instrument. The patient says he was wounded by falling from a cabriolet. A simple dressing was made. On the 25th, M. Dupuytren carefully examined the patient; it did not appear to him that the cause stated sufficiently explained the nature of the wound of the forehead. He therefore insisted on knowing the truth, and the patient, after considerable demur and reluctance, acknowledged that he had attempted suicide with a pistol charged with a brace of small balls, which had been extracted before he came there. A probe made known a circumscribed portion of the coronal suture, bared and rough. An incision of the integuments was made. (Low diet, bleeding, pediluovia, and lint dressings.) On the 26th, after a restless night, the patient is quiet, but melancholy, and with head-ache: the upper part of the face looks erysipelatous. (Bleeding again: pediluovia.) On the 27th, the swelling of the eyelids is increased, and there is fever. The 28th; the belly is tumid and tender; the tongue red (two grains of tartar emetic; in the evening, twenty leeches to the epigastrium). The 29th: he appeared relieved by the leeches; the erysipelas is diminished.

The 1st of April: is better: erysipelas gone: sleep; appetite: some food taken. A piece of wadding was extracted from the wound; abundant suppuration. The 3rd: no general symptoms; suppuration still copious; dressing with graduated compresses. The 7th: the patient complains of having been feverish: the wound still of good aspect. The 8th: the fever and inquietude are increased: there is some delirium and tendency to stupor: the face shrunken: sub-sultus tendinum: the wound is nearly laid bare by the movements of the patient during the night: it is of a greyish colour, and nearly dry. (Twenty leeches behind the ears: mixture with two grains of tartar emetic.) The 9th: the day and night both bad; incessant delirium or coma. Sinapisms produce no effect. He is at the worst; the face is anxious, the breathing stertorous and frequent: meteorismus. Twenty-leeches again to the head, and emetic mixture. Death in the evening.

Dissection.—The skin is separated by pus for the space of half an inch around the wound: the wound is no way depressed at the point where the ball had struck, and the periosteum alone was wanting there; the neighbouring soft parts contained extravasated pus. The veins of the orbit are full of yellow purulent matter. On opening the cranium and detaching the dura mater from the posterior surface of the frontal bone, a purulent collection is found directly behind the spot where the ball had struck. Suppuration was also found between corresponding portions of the arachnoid and brain. The latter is depressed in the same place into the shape of a small cup, and is softened and greyish, while the surrounding part is red and injected. The liver is studded with yellow spots, covered with a false membrane. Several incisions pass through purulent cysts in the liver, varying in size from a pea to a nut, and amounting in number to nearly one hundred and fifty. Numerous similar collections are met with in the lungs near their surface. The abdominal viscera are sound.—*Dissert. sur la Phlébite Traumatique, by A. G. Darcy.*

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Hospital Reports.

WESTMINSTER HOSPITAL.

Anthrax.

THOMAS NAAS, aged 63, was admitted this day (January 5th), into the hospital by Mr. Thompson, with severe carbuncular inflammation of the outer part of the thigh. He is a large and stout man, of plethoric habit, and evidently one who has not restricted himself to the diet-roll of Lewis Cornaro. He is a native of Dudley, in Staffordshire, where he has always resided, his employment being that of a smith in the iron-foundries. He has been in London about

two months. He states that the only material difference in his diet and mode of life since he has been in town, consists in his having taken rather freely of London porter, to which he has not been accustomed. For some time back he had noticed a trifling numbness of the outer part of the thigh, in the seat of the present disease, but this did not attract his attention, until about ten days since, when he observed two large "blisters," about the size of pigeons' eggs, in the same situation. He broke these, and the sores which were left gradually became worse, until the present period. He had applied for relief to some practitioner, who ordered him to apply poultices of linseed meal.

At the present time, the local affection consists of two deeply excavated ulcers, in the situation before indicated, with thick, everted, and highly inflamed margins, containing in their centres a dirty white slough. One of these is perfectly circular, and about the size of a five-shilling piece; the other is of a more irregular form, approaching somewhat to an oval. The two are closely approximated, and are surrounded by an extensive patch of erysipelatous inflammation, which is attended by considerable tumefaction, from subcutaneous infiltration, giving the characteristic sensation on the application of the hand. He has lost all appetite, the tongue is covered with a dirty white fur, and the bowels are torpid. The pulse is 96, full and soft. The following were prescribed:—

Rx. Hydrarg. submur., gr. vj.;
Ext. colocynth., co. gr. x M ft.
pilul. iij. statim sumend.

Rx. Haust. purgans, domest., vespere sumend.

Rx. Cataplasma. Lini constanter app.

6th. The bowels have been freely relieved; the pulse is now only 84, and not so full. The local affections remain as yesterday.

7th. The inflammation surrounding the ulcers is considerably diminished; the pulse 72; he is taking the following mixture:—

Rx. Decoct. cinchonæ, ʒ vij;
Tinct. cinchonæ, co. ʒ j;
Acid. sulph. dil. ʒ j, m. ft. mist.

Capt. cochl. ij, ter in die.

18th. He has had an attack of diarrhoea, which Mr. Thompson ascribes to the acid in the mixture; is therefore ordered to be omitted; in other respects his general health is much the same. The sloughs are separating, and the surrounding erysipelas is much decreased. The two ulcers have, however, by an extension of the ulcerative process, become united into one, upon the surface of which, a few points of pus are to be seen, which apparently makes its way from below; a considerable tumefaction remains. Mr. Thompson to-day stated in the wards, that he regarded the case as one

of pompholyx solitarius, whilst Mr. W. B. Lynn, when he saw it the other day, denominated it carbuncle. It certainly would appear to possess all the essential characters of the latter disease, in a mild form, except that the burning pain usually met with in anthrax, has not been noticed throughout; and that it commenced with larger bullæ than is general, and which might be compared to those of pompholyx.

12th. The sloughs have separated, and the ulcers are all beginning to granulate; the poultices have been omitted, and simple dressings, with the application of a roller, substituted. He continues the bark mixtures.

14th. The edges of the ulcer have lost their thickened and everted character, and the surrounding inflammation has nearly disappeared, although considerable tumefaction remains. His general health is now very good.

21st. Much better: the ulcer is rapidly healing, and the tumefaction diminishing.

27th. Discharged the hospital cured. He has returned to Dudley.

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An Address delivered at the Birmingham School of Medicine and Surgery, on Monday, October 6th, 1834. By John Johnstone, M.D., Fellow of the Royal Society, and of the Royal College of Physicians.

THE following eloquent and well written address was lately delivered at the Birmingham School of Medicine to a large auditory, consisting of noblemen, gentlemen, and professional men, and excited much applause. We condense much of the lecturer's observations, as they were necessarily of local interest. We have pleasure in informing our readers, that the Birmingham School possesses an excellent library and museum of natural history; that that institution is managed by donors, who, with the eminent medical practitioners, appoint lecturers, to be removed unless they perform their duties and evince high talents. If this regulation were generally adopted in the medical schools of this empire, many noodles would be removed, and beardless, brainless lecturers allowed to "waste their sweetness on the desert air," which by the way students sometimes compel them to do at present.

"My Lords and Gentlemen - Although I have no anxiety lest the celebration of this day should prove satisfactory to you, and although I have so frequently experienced your kindness personally to myself, yet when I see so many venerable and learned persons around me—men accustomed not only to give counsel in private affairs, but even delegates to the Supreme Authority—I cannot but wish that you had assigned the part now entrusted to me to some more able hand. I am encouraged, however, to believe that my cause, if not my talents, will secure for me that benevolent attention

which, in an audience like this, whatsoever tends to the public utility is sure to meet with—and therefore confidently do I address you on the opening of this, permit me to call it, Temple of Science—not sprung, indeed, from the ashes of antiquity—not adorned by venerable recollections—not built on the remnants of columns which, in their pristine glory, supported an edifice dedicated to science, and worthy of its author; but an establishment altogether new, altogether the work of our own compatriots, created by their own hands, furnished by their own industry, and to be perpetuated, I trust, by the continued munificence of you, its noble patrons—and of you, its learned, its industrious, its vigilant, and its exemplary instructors and promoters.

“Well knew our ancestors that, where instruction was to be imparted, *there* instruction should have a home and an abode: they well knew that the seed cast on the sand had little chance of rooting. From the earliest beginnings of this institution, it was a necessary part of the meditation of the founders to have regard to a domicilium—to a place of refuge, as it were, where those who taught might resort, and where those who wish to learn might attend. In the beginning of our institution, narrow indeed were the means, few were the powers, and small the accommodations of those persons whose intentions have been thus far realized this day. Though Birmingham may be called the metropolis of the west, it has hitherto brought forth no Linacres to frame a royal foundation of science, no Harvey to enrich it with invention and to illustrate that philosophy which Verulam has now made universal and immortal. Yet may we gratulate ourselves on making no humble attempt. Yet do we hope that the foundations of our academy will be laid deep and firm; and with the patronage of such friends as those who now surround me, and of such moreover as decorate our list, surely we have a right, not only not to despair, but even greatly to hope.

“In tracing the history of this school, the work is in so narrow a compass that I need not detain you long in the detail. From small beginnings under our own eye has the Medical and Chirurgical School advanced to its present height. We have witnessed its birth, we have watched its growth, all about it is clear and ascertained, and some among you have the greater reason to be proud, because, in contemplating it, you contemplate the work of your own hands and your own minds. To Mr. Sands Cox is due, not only the formation of the school, but the idea in which it originated. After a liberal education in his own country, he visited Paris in 1824 for the express purpose of preparing himself for delivering lectures in anatomy and surgery. In October, 1825, he first submitted his plans to the Profession

in Birmingham, and delivered his inaugural lecture. In 1826 and 1827, for the purpose of obtaining information, he visited the schools of Edinburgh, Glasgow, and Dublin, still continued to recommend the formation of a regular school in Birmingham; and, by that impulse which zeal and talent are sure to impart, in 1828 he gained the patronage of some of the seniors of the Profession in Birmingham, and the school was constituted.

“That there might be neither monopoly, nor the appearance of monopoly or exclusion, the lectureships were offered to all the physicians and surgeons, hospital and dispensary; according to seniority; and Dr. Pearson, Dr. Booth, Dr. Eccles, Mr. Jukes, and Mr. Ingleby undertook the task of lecturers in the several branches of medical science; and although Dr. Booth and Mr. Jukes did not long retain their posts, yet was the school materially served by their zeal and activity, whilst they continued lecturers. The school was then formally opened by an eloquent address from Dr. Pearson. Pupils flocked to the lectures, and all the Physicians of the General Hospital threw open their practice to them without fee; and thus a regular train of instruction was laid. Long before this period, clinical discourses had been delivered at the General Hospital, and in the end the example originally set there was followed by the dispensary. The physicians to the latter institution liberally opened their practice to the classes; and thus the clinical part of the instruction became general after 1832.

“Up to 1829, the School had only the convenience of one room for all its purposes. In consequence of this narrowness of accommodation, the Lecturer in Anatomy offered to build a set of rooms, provided the body of lecturers would guarantee a certain rental, for the reception of the Museum and Library; and in order to learn how to arrange the Anatomical Museum in the best form, our enterprising and unwearied founder undertook to visit various collections in France, Germany, and Italy. On his return, the means of founding a Museum and Library appeared so scanty, that it was determined, in 1830, to solicit the aid of the neighbouring patrons of science to extend the plans and the usefulness of the Institution. The aid was liberally granted, and the donations of our benefactors, to the amount of £900., were expended in the purchase of preparations, expensive books of plates, and the fitting up of the Museum and the Library. The institution now assumed its present form and feature, and the different offices were filled up as they at present stand. In 1832, a catalogue of the Museum and Library was published; prizes of ten guineas were offered by Edward Johnstone, M. D., and of five guineas each by T. Lane Parker, and Edward T. Cox, Esqs., given to Mr. James Wilkes and Mr. Hammond, for their compositions; the first, on the Sympathetic

Nerve, was adjudged by Dr. Peasman, Dr. Eekes, and Mr. W. S. Cox, and the other, on Hernia, was adjudged by Sir Astley Cooper. Sir Kardley Wilmet next gave a gold medal, and E. T. Cox, Esq., who has been one of our most zealous benefactors from the beginning, another, for the best anatomical preparations; and finally, a gold medal is offered by John Meredith Esq., for the best Essay on the Blood. To these honorary stimuli the pupils have ably responded; the treatise of Mr. James Wilkes and Mr. Hammond, which have been printed and given to the public, deserve, and would have received commendation from either of our Universities; and the preparations of Mr. John Elkington could not fail to extort praise even exhibited to the experienced eyes of London and Paris Anatomists.

"I have particularized the names of these students, because they have received the public honors of the institution. There are many other preparations, from other hands, highly distinguished by their merit, and there are other works read amongst themselves which evince the ardour, the diligence, the originality, and the intelligence of the aspirants; but these exertions and these merits have been praised in better terms than I can express them in, by the celebrated men who have probed the qualifications of the students annually, at the set examinations. I wish the time would allow me to repeat them all, but we can none of

us forget the emphatic commendation of Mr. Beansby Cooper, whose lecture on Hernia we listened to with so much admiration, at the first public meeting, in this very room. The fruits of the Instruction received in the School have indeed manifested themselves so conspicuously, that it is our pride to be able to point out gentlemen educated here who have been marked with praise and distinction, not only by the public examiners in London, but at this hour we can boast of practitioners, settled in several counties around us, who are diffusing the benefits of their good education, and are already receiving their due honours and rewards from the public confidence."

CORRESPONDENTS.

Mr. Williams—The word Portsmouth was substituted for Plymouth, as the latter had not been previously mentioned in the letter, and was supposed to have occurred in the haste of writing.

Castigator—Will find his communication in this number.

Medicus—Billingsgate is not libellous—the article is under consideration.

Hibernus—We daily expect the lectures.

WEEKLY METEOROLOGICAL JOURNAL.

1835.	Moon.	Thermom.			Barometer.		De Lue's Hygrometer		Winds.		Atmospheric Variations.		
Jan.													
29		43	49	43	29.92	29.88	79	76	S.S.W.	S.W.	Foggy	Fine	Fine
30		47	49	38	29.85	29.80	76	74	S.S.W.	S.S.W.	—	—	—
31		42	46	41	29.75	29.87	74	74	E	S.S.E.	Fine	Foggy	—
Feb.													
1		45	51	41	30.00	30.01	74	76	S.S.E.	S.	Fine	Fine	—
2		41	49	44	29.87	30.00	75	74	—	—	Cloudy	—	—
3		45	52	44	30.12	30.15	72	65	S.S.W.	W.	—	Cloudy	—
4		44	51	43	30.20	30.20	63	60	W.S.W.	S.W.	Fine	Fine	—

50, High Holborn.

WILLIAM HARRIS and Co.

All communications and books for review are to be addressed (post paid) to Dr. Ryan, 4, Great Queen-street, St. James's Park, Westminster; or to G. Henderson, 2, Old Bailey, Ludgate-hill.

Advertisements should be forwarded before the afternoon of Thursday; all books for review on Wednesday; and all communications on Monday, if intended to appear in the ensuing number.

THE

London Medical and Surgical Journal

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SATURDAY, FEBRUARY 14, 1835.

Vol. VI I.

LECTURES

ON

MEDICAL JURISPRUDENCE,

DELIVERED BY PROFESSOR A. T. THOMSON,
F. L. S.,

At the University of London; Session 1834-35.

LECTURE XVII.

Assurance of Life.

GENTLEMEN—The next subject that demands our attention is Assurance of Life

It is a universally admitted axiom, that nothing is more uncertain than the duration of life, when individuals are referred to; for when we examine the mortality of communities, it is truly curious to remark the uniformity of annual mortality, the excess of deaths in any year rarely averaging more than a small fractional part of any given number of years. It is upon this principle that life Assurance Companies have been formed; and it is easy to comprehend the mutual advantage which must result both to the assurer and the assured: in the one case the advantage arises from the little change in the average of annual mortality in a society or large body of individuals; in the other case, the advantage arises from the uncertainty of human life, as far as concerns individuals.

It is not necessary, in a Course of the nature of this one, to demonstrate the basis of the calculations which have been made to insure a profit to the assurers: I may only remark that it proceeds upon the knowledge of the average mortality of any given number of persons, at different periods of life, and the period which is required for the death of the whole. It is with individuals that we have to do; and therefore, in order to form our opinion of risks, and to state it in certificates of health, and in courts of civil law, we must make ourselves acquainted with the probabilities of death, at different periods of life, as this has been determined by long and accurate observations. We must also take into account the effects of several trades and species of labour in regard to the health of the individuals exercising them;

VOL. VII.

the rank of society in which the individual who is about to insure his life is placed; for it is evident that persons in the middle and higher ranks of life are exempt from many sources of unhealthiness to which the labouring classes are liable. At the same time, much depends on the habits of the individual, to whichever class he may belong; whether these are sedentary or active, whether he is temperate or luxurious, and whether his mind be highly cultivated and exercised, or be allowed merely to vegetate. The advice of the late Dr. James Gregory, to a hypochondriac patient in high life—"Live upon sixpence a day, sir; and work for it"—is of more general application than is commonly supposed.

In looking, also, at the probability of health and of life, we must take into account the residence of the individual: thus, in reference to England, we find that, according to computations which can be depended upon, the average of deaths in 1780,

In Middlesex, were 1 in 36—	1821, 1 in 47.
Kent	1—41
Warwickshire	1—42
Cambridgeshire	1—44
Essex	1—44
Surrey	1—45
E. part of York- shire	1—47
Lancashire	1—48
Sussex	1821, 1 in 72.

The average of the annual deaths in England, in 1780, were 1 in 40; in 1821, 1 in 58; in Scotland, in 1801, the average mortality was 1 in 56.

Stepping out of our own country, and looking at other countries, we find that the average is generally greater than the mean of those which I have just mentioned; but we also find that this depends rather upon the habits of the people, the degree of advancement to which medical science has attained, and the variable supplies of provisions, than on local causes connected with the country and its topography. Thus, in Sweden, a country subject to frequent scarcity of provisions, and where medical education and skill are proverbially bad, we find the deaths annually averaging 1 in 35; in th

Pays de Vaud, 1 in 48; in Russia, about 1 in 41; in France, 1 in 40; in Prussia, 1 in 35; in Naples, 1 in 35; in Wirtemberg, 1 in 33; in the United States, 1 in 40; whereas, in this country, in an equal period, say fifteen years, the average does not amount to 2 per cent., or 1 in 50.

Such are the principles upon which Life Assurance Offices are founded, and upon which the calculation of their profits are grounded, so as to give a fair anticipation of success: but this, after the best calculations, can only be secured by guarding against every circumstance that can tend to render these fallacious, by interfering with the ordinary risk of life. Every Insurance Company, therefore, requires that the party on whose life an assurance is to be made should appear personally at a meeting of the Directors, or, if he do not appear, a higher premium is required, because the probability is that some latent disease may exist in this individual, which, although it be not observable to others, yet may be detected in the countenance of the person, by the experienced eye of a medical practitioner. This source of security to Assurance Offices, therefore, is obtained, either by a sum of money adequate to the risk, or by the examination of the proposed candidate for assurance by a medical practitioner; thence the necessity for making this a subject of instruction in a Course of Medical Jurisprudence.

It is of great importance to every Assurance Company to have medical practitioners attached to it, on whose honour and integrity they can depend, not less than upon their medical skill; for, if the mind of the examining physician do not rise superior to temptation, it would frequently happen that he might be induced to overlook the circumstances which constitute a bad life: thence the necessity for moral rectitude, to maintain not only individual character, but also the honour of the profession. Skill, also, is required, and the exercise of a nice discrimination in the investigation of the previous and general state of health of the person applying to be insured. But, besides having medical practitioners attached to the offices, Assurance Companies require a declaration from the usual medical attendant of the person about to insure, that he is not subject to any disease tending to shorten life; and also, that the party is not addicted to any habits that are likely to abbreviate the ordinary term of life. There is no compulsion on a medical man to reply to such a demand from an Assurance Office; but the Office rests secure that their communication will be answered, as it equally obliges the person to be assured and the Office; and a practitioner refusing to reply to it would certainly stand a good chance of losing a patient. This certificate is supposed to be correct, and the circumstances mentioned in it to be reported on his personal knowledge of the party. Instances have occurred of

false certificates having been obtained; but the exposure of some of these has proved that such conduct is not safe, whilst these cases have also brought into Court others in which unjust suspicion has been thrown upon the medical men who have granted certificates, and examinations have taken place, which have placed medical witnesses in a very awkward and uncomfortable situation; it is, therefore, necessary that the practitioner should be prepared to meet every question which may be put to him in the course of a cross-examination. Thus, a medical man certifies that the person about to be insured enjoys *good health*: but he has not perhaps attended that individual for a considerable time; or perhaps, although he may have attended the family of the person who applies for the certificate, yet he may never have prescribed for him. In this case, he must be certain that he has enjoyed good health, and has not been the patient of another during the period alluded to. There is also a case in point, published in Mr. Amos's printed Lectures, in which that gentleman was counsel. (See Med. Gazette, vol. viii, p. 197.)

I recollect, also, in a case of this kind, that the counsel put this question—"Pray, sir, what do you mean by health?" The reply was a natural one—"The absence of disease:"—but this was not satisfactory, and brought forward another question—"What is disease?"—which I recollect was very indifferently answered; and, consequently, did not raise either the character of the practitioner or that of the profession in the opinion of the Court. Now, let us consider what the answers ought to have been.

Health may be defined the due performance of all the functions of the body and the mind. *Disease* is that state of the body in which one or more of its functions are irregularly or imperfectly performed. But another question arises—How are these states to be judged of? With regard to the first state, that of health, our opinion may be formed, with some degree of accuracy, from an attentive examination of the countenance, of the attitude, of the general state of the surface of the body, and of circumstances connected with the functions of the brain, those of the chest, and those of the abdomen. With regard to the second state, that of *Disease*, besides involving the negative of the healthy phenomena, it also comprehends the whole doctrines of diagnosis.

1. With respect to the appearance of the countenance in health, this must vary with age: but as you are not likely to be called upon to answer questions relative to the insurance of infants, nor those far advanced in years, I shall confine my remarks to youth and adult age. In youth, whatever may be the form of the head or contour of the countenance, health is indicated by a firm, elastic state of the cellular membrane, and a vivid complexion, perfectly distinct from tumidity

or bloatedness, and still more obviously the reverse of that shrinking of features, which is the result of disease. The muscles are not marked by abrupt elevations and depressions, but are filled up, so as to afford roundness, which, with the injected state of the cellular membrane, affording both elasticity and colour, are the chief characteristics of health, as far as it is indicated by the countenance in youth. In the female, some circumstances vary these appearances, although they cannot be regarded as indicating disease. Thus, just before and during the menstrual discharge, the complexion becomes less clear and fair, some degree of blackness appears around and below the eyes, the tongue is loaded, and the breath slightly tainted. In the early months of pregnancy there is a peculiar relaxation and enlargement of the features, and the countenance is somewhat tumified; and in the latter stages there is, usually, an expression of uneasiness. It is of great importance not to confound these appearances with those of disease. In adult age, the circulation being more moderate in force than in youth, the cellular membrane is less firm and elastic, and depressions at the insertions of the muscles, or wrinkles across their fibres, do not indicate disease. At this age the subcutaneous veins are very obvious, but this must not be confounded with their varicose state. In health, in the adult, we may expect to find strength, without great activity; nevertheless, each function should be performed with ease, and without turbulence; and from the state of the circulation, the complexion is usually less florid than in youth; besides, the influence of disease over the countenance and complexion is less obvious. If the teeth have fallen from their sockets, and the alveolar processes are absorbed; if the lower jaw is more elevated; if the lips are drawn inwards over the gums, and the mouth appears to be lessened in depth; if the muscles are deeply marked, the skin sallow, and the veins communicate a dark hue to the face, or it is pallid and exsanguineous; these are characteristic either of premature old age, or of disease.

In judging, however, by the countenance, we must take into account the temperament of the individual, his state of mind, and several other extraneous circumstances, which modify the character of the face even in health. In those of a sanguine temperament, the complexion is more than generally florid in youth; it is of a deep hue in adult age; and the expression is soft. In the bilious temperament it is dark, the cellular texture compact and somewhat rigid; the eyebrows large and dark, the beard strong, and the iris and hair dark coloured. In the phlegmatic temperament, the countenance appears usually slightly tumified, the elasticity is defective, and the countenance is pale and sallow; the hair is apt to be lightly coloured, and the eyebrows

and beard are scanty. As far as regards the mental expression of the countenance, the causes which produce anger, fear, grief, anxiety, or despondency, are incompatible with health, whilst those of contentment, gaiety, and openness of countenance, indicate both a happy state of mind and a healthy condition of body. But several extraneous circumstances greatly modify every indication to be deduced from the countenance, and ought, therefore, to be kept in view: these are chiefly bodily exercise; the temperature of the weather or the room in which the examination takes place; repletion of the stomach, the free use of wine; or a state of defective nourishment.

The negative of these states indicate disease; but we must, in this case also, remark the state of action of the muscles, whether any unusual or inordinate actions exist, either general or partial, and whether these be really the effects of disease, or merely of a bad habit: as irregular and spasmodic movements of the muscles of the face may exist, and yet the patient be in the best possible health. It is unnecessary to enter upon the details of the effects of different diseases on the countenance; each has its peculiar characteristics, with which every man who pretends to cure diseases should be familiar.

With respect to *attitude* indicating health, the body is usually supported on one limb, whilst the other only moderately aids the maintenance of the body from falling, and is generally placed at a short distance, laterally, with the toe turned out; the trunk is gently inclined to the opposite side; the head is placed upright; and in the lateral aspect the spine appears gently curved. If the body be in motion, we find that in youth the step is rapid, quick, and elastic: in adult age, the step is firm and the body erect, but the gait is less elastic and more steady. If all elasticity be lost; if the step be slow and insecure; and the spine be much curved forwards, at this period, there is much reason for suspecting the presence of disease. In pregnancy, the natural attitude of the healthy female is altered, and in both sexes it is influenced by the state of the mind, and several extraneous circumstances, all of which ought to be taken into account in forming our estimate of health from attitude. In some diseases the criterion of attitude is much to be depended upon; thus, the erect posture is an uneasy one in vertigo; it is unnecessary to say how obviously paralysis is displayed by attitude and movement; in phthisis some particular posture is chosen in which the cough and dyspnoea are less oppressive than in any other, and in asthma there is an elevation of the shoulders, and an inclination backwards of the head, to fix the scapular and other muscles which aid the elevation of the chest during the paroxysm, and habit maintains this position when it is absent. In incipient affections of

the heart, on suddenly rising up, or on any rapid movement, a degree of dyspnoea is immediately induced: and in the same manner many other diseases are characterized by attitude or posture.

It is unnecessary to proceed more into detail in this part of our subject; the diagnostic appearances of diseases cannot be too closely studied for the advantages to be derived from it in practice, independent of its importance in determining on the propriety of insurances; and in this case, it is of more importance to ascertain the presence of health, than to determine the existence of any particular disease; neither is it necessary that a state of the most perfect health exist, in order that a medical man may, conscientiously, give a warranty that a person is in *good health*: it is sufficient that the individual enjoy a reasonable state of good health. The extent to which this may be carried is well exemplified in an action on a policy made on the life of Sir James Ross, quoted in Paris and Fonblanque's work, from Park on Insurance, which I will read to you*.

I have quoted this case to shew you to what extent a practitioner may legally venture in giving a warranty of health; but, at the same time, I would not advise you to act upon it; no physician, in my opinion, could lay his hand upon his heart and affirm, that with such an infirmity as Sir James laboured under, his life was a good one; and although the partial paralysis which afflicted him had no immediate connection with the malignant fever of which he died, yet by diminishing the powers of vitality it undoubtedly rendered him more susceptible of diseased impressions, and less likely to shake them off when they had fixed upon the habit.

In the printed queries issued by the Assurance Offices, several diseases are expressly named as tending to shorten life. Now the question is, What is the meaning of the term disorder to shorten life? It has been ruled that in this term is not to be included any disorder which is neither organic nor excessive, with which a person is afflicted before he effects an insurance on his life†.

From the tendency of the legal opinion in this case, it is obvious, that the warranty of a medical man, that a person has no disease which tends to shorten life, does not imply that he possesses that state of health which may be strictly termed perfect. The warranty in these terms only implies that he enjoys a state of health which may reasonably be regarded as good, in the common acceptance of the phrase. The question, Has he or she had the small pox? is always put down: for, when this has not occurred, and the person has not been vaccinated, the risk is justly thought to be augmented, and the

premium is considerably increased. I have said, *justly* thought to be augmented, because it has been demonstrated, by the clearest evidence from the most extensive inquiries, that the introduction of inoculation and vaccination has increased the mean duration of human life about three years and a half; and on this evidence a Monsieur Duvillard has computed tables, from which the risk arising from the chance that a person who has not been inoculated or vaccinated shall die of the small-pox, may be known, for any age. It is, nevertheless, a curious fact, that at one of the best Assurance offices, the Equitable, although a person who has been vaccinated is admitted on the usual terms, yet, if he die of small-pox, his policy becomes void. This is a regulation of the society, with which every person who insures in it is made acquainted, otherwise its equity might be justly questioned.

Another disease particularly specified is gout: Has he or she ever had gout? the probability of the recurrence of the disease being calculated upon, and a higher premium, consequently, is demanded. The hereditary nature of this disease, however, does not legally affect a warranty of health, as was decided by Lord Mansfield in a case, *Willis versus Poole*, which was a case of gout. "Such a warranty," says the learned judge, "can never mean that a man has not the seeds of disorder. We are all born with the seeds of mortality in us. A man subject to the gout is a life capable of being insured, if he have no sickness at the time, to make it an unequal contract." It is a curious fact, that out of 152,000 persons, insured in the Equitable Insurance office, from the year 1800 to 1821, of every age, from ten upwards, only twenty-six died of gout: the supposition, therefore, that gout tends to shorten life, is at least problematical. In filling up an insurance paper, however, the fact of the individual having had attacks of gout ought always to be mentioned; although the fact just mentioned would justify us in regarding it a disease not likely to shorten life. In filling up a certificate of health, if no specific question be put concerning gout, you are not bound to take any notice of it, in reply to the general question, Has he or she any disorders which have more or less a tendency to shorten life? As this, however, is a question involved in every medical certificate required by Insurance offices, before they issue a policy, and, as medical men are liable to be called upon to justify their certificates in open court, it is requisite that you should be well prepared to reply to the interrogatory, What are the diseases tending to shorten or endanger life? In strictness, every disease, however trifling, has a tendency to shorten life; but this is not the meaning of the parties: the question refers to those only which have a very decided influence in shortening life; such, for

* See vol. 1, p. 383, or 2 Park, 649.

† See Taunton's Reports 4, p. 763.

example, as apoplexy, ascites proceeding from some organic derangement of one or more of the abdominal viscera, cancer, hæmoptisis, pulmonary consumption, angina pectoris, lumbar abscess, and frequent vertiginous attacks. If any of these, or such like, exist in the system of the person to be insured, they ought undoubtedly to be noticed, otherwise the contract between the insurer and the insured is not equal. Insanity is another disease which ought to be noticed, not because it directly tends to shorten life, but because it is often complicated with epilepsy, apoplexy, and other diseases which have such a tendency. Fits of any kind are also grounds of exception, which are generally specified in the printed certificates; but, when this is not done, it is the duty of the medical practitioner particularly to mention them.

In almost all the printed queries of the Insurance Offices, a quest on is put respecting the tendency of the patient to attacks of stone or gravel. In forming your opinion upon this subject, you must not only take into account the condition of the person at the time, but the constitutional predisposition in the family, to such diseases; for this is peculiarly marked in some families, and has proceeded for successive generations. It is not necessary, however, to mention this in your answers to the Insurance Office; but the knowledge of the fact should make you more particular in your inquiries than, under other circumstances, you would think requisite. And these remarks, in a still more striking manner, relate to phthisis.

But the most difficult query to reply to is that which relates to any circumstance which, in the opinion of the medical man applied to, would render the assurance of the life hazardous. In this sweeping query many things are comprehended. Thus, a person may be free from either organic or functional disease, yet his mind may be so harassed by anxiety, from many causes, as to tend greatly to shorten the term of his life. I know of nothing more strikingly illustrative of this fact than the cause and fatal issue of the disease termed nostalgia by systematic writers on medicine. In this disease the causes are solely mental—a strong desire in a person who is in a foreign country to return home, without the possibility of accomplishing his wish. In the first instance, the spirits sink, the person becomes languid, pensive, emitting deep sighs, and losing interest in every thing around him. The liver and stomach soon feel the diminished energy of the nervous system, dyspepsia supervenes, the secretion of bile becomes unhealthy, tremors of the limbs succeed; and, as the whole of the secreting organs suffer, the lungs, especially if latent tubercles exist there, soon share in the general morbid state of the habit, and phthisis gradually displays itself. Dr. Avenbrucker, who has written on this disease, observed

that in several who died of it, the lungs were adherent to the diaphragm, in some parts indurated, and in others purulent. Here is an evident proof how powerfully mental causes operate, and, consequently, how essential it is not to overlook them in replying to the query to which I have referred. The very circumstance of a consciousness that some mental anxiety pressing on the powers of the constitution was likely to terminate in bodily disease, may indeed be the origin of a desire to effect the insurance; and, if this be known to the medical attendant, not to communicate it would invalidate the policy.

With respect to intemperance in reference to the abuse of spirituous liquors, there can be only one opinion of its influence in sapping the powers of life; every repetition of debauch deducts something from the strength and vigour of the constitution. To employ the elegant language of Dr. John Reid, "some leaves fall from the tree every time that its trunk is shaken:" and the dreary nakedness of winter is brought on long before that season would have commenced in the regular course of nature. But there is one species of intemperance, which is neither so easily detected nor so readily pronounced upon; I refer to the abuse of opium, the habit of indulging in the use of which is daily gaining ground in this country, to a most alarming extent. In an interesting Essay on the effects of opium eating, on health and longevity, published by Dr. Christison, in the 110th number of the Edinburgh Medical and Surgical Journal, and copied into the Medical Gazette of the 14th of January, 1832, we find that the opinion of that distinguished medical jurist is, that the habitual use of such a narcotic as opium, by disordering the digestive functions, and producing obvious emaciation and premature old age, cannot be consistent with the enjoyment of health in general, and is very greatly against the chance of an average prolongation of the term of human life; consequently, that the "*life of the opium eater is uninsurable.*" My own experience fully justifies this opinion of Dr. Christison: I have known several opium eaters, but all of them died of worn out and emaciated constitutions. Death from duelling, suicide, and all violent means that might have been avoided, nullifies a policy of insurance*.

Such are the chief circumstances to be attended to in framing your report respecting the insurable or noninsurable nature of a life. Under every circumstance, you must bear in memory that you have two duties to perform—one as a member of society, called upon to do justice between man and man, the other as a member of an honourable profession—and that neither of these characters can be upheld except by an implicit adherence to truth.

* See Douglas' Reports 2, p. 788.

LECTURES ON THE INSTITUTIONS OF MEDICINE,

DELIVERED BY JOHN FLETCHER, M.D., F.R.C.S.E., AT THE ARGYLE SQUARE SCHOOL OF
MEDICINE, EDINBURGH; SESSION 1834-35.

LECTURE X.

IV.—The fourth of the formerly proposed distinguishing features in the structure of organized beings, furnishes the foundation for what is called **ORGANIC CHEMISTRY**, or that science which professes to describe the proximate principles of the tissues and fluids of plants and animals.

Inorganic matters may be either elementary or compound, and the latter may contain indiscriminately any of the fifty-four ponderable elements of all things: any single compound, however, has often only two such elements, and the combination, even when it has three or four, is always indirectly binary, being first one with one, and the compound thus formed, afterwards uniting with either an element or another binary substance. An organized being, on the contrary, is always an aggregation of compounds, each of which, while it can contain only certain definite elements—the chief of which are oxygen, hydrogen, carbon, and nitrogen, to which are sometimes added, in much smaller quantities, iodine, fluorine, chlorine, phosphorus, sulphur, aluminum, calcium, potassium, sodium, and some others, in all nineteen—has very rarely fewer than three or four, which are, at least after the cessation of its vitality, combined together directly into a ternary or quaternary substance. Again, an inorganic compound, the chemical nature of which has been once ascertained, may be in general easily imitated artificially; since its elements are associated, as well as held together, by common chemical affinity. An organic compound, on the other hand, however easily—at least after the cessation of its vitality—it may be analysed, cannot, if ternary or quaternary, be formed by art; since its elements, although after their association, held together by common chemical affinity, are always associated by a process called secretion. (*a*) Lastly, in an organic compound, the combination of the elements is too energetic to admit of any tendency to spontaneous separation; whereas, in an inorganic compound, such is commonly—after the cessation of its vitality—the weakness of this combination, if it be ternary or quaternary, that it generally tends rapidly, under favourable circumstances, to decomposition.

By the term proximate principle, then, is to be understood a vegetable or animal compound, formed directly by the union of certain elements, and characterized by distinct chemical properties, and, by its union again with others, contributing to form the several tissues and fluids of organized beings (*b*).

(*a*) It is true, some few vegetable and animal compounds—ternary, as stearin, or at least a fatty substance resembling it, and even quaternary, as urea, or at least something like it—are said to have been formed artificially, the former by Bérard, and the latter by Wöehler; but the accounts are rather apocryphal—at any rate, so rare at best have been such manufactures, that they cannot invalidate the general proposition advanced above. We know, indeed, that binary compounds, such as carbonic acid and water, may result equally well from common chemical affinity as from secretion; and there is nothing, therefore, irrational in the idea that ternary and quaternary compounds might do so likewise; but such combinations are certainly not commonly nor easily effected in a chemical laboratory. It has, nevertheless, been considered not improbable that we shall, in future, be able to form artificially, not only organic proximate principles, such as albumen, gelatin, and fibrin, but proper tissues

also, and even whole organs, such as bones and muscles; (*Edinb. Review*, vol. XXIII, p. 389); so that it may be hoped it will not much longer remain a secret.

What medicine 'twas that Paracelsus
Could make a man with, as he tells us;
and that we shall shortly be able to imitate the philosopher mentioned by Amatus Lusitanus, and compound a child outright, “marrow, bones, and all,” by the help of a pestle and mortar!

(*b*) Organic chemistry is a science of comparatively recent date. The ancients made nothing intermediate between their *στοιχεῖα* or elements, on the one hand, and their *διμοιομενῆ*, or simple organs, and *τύπα* or fluids on the other; and the earlier modern chemists are either quite silent on the subject of proximate principles, or speak often with the utmost indecision and vagueness. The two Rouelles and Scheele made some slight advances in the science about sixty years ago; but it is hardly thirty years

The proximate principles of vegetables contain in general a great proportion of carbon, while they are commonly destitute of nitrogen, and they are for the most part ternary (a); whereas those of animals contain usually much nitrogen, while they are in general comparatively deficient in carbon, and they are for the most part quaternary. The former, again, among the less common principles, contain more frequently potassium, whereas the latter contain more frequently phosphorus, sulphur, calcium, and sodium; and, while it is in vegetable compounds only that aluminum has hitherto been detected, animal compounds alone have afforded fluorine. Of course, from their deficiency of nitrogen, vegetable compounds in general are less prone than animal to that modification of spontaneous decomposition called putrefaction.

The following are the chief proximate principles—as composed at least of the four chief elements above alluded to:—

OF PLANTS.

I. *Binary.*

(Of oxygen and hydrogen).

Water.

(Of oxygen and carbon).

Oxalic acid.

(Of carbon and hydrogen).

Coutchouc.

II. *Ternary.*

(Of oxygen, hydrogen, and carbon, the two former in the same proportions as in water).

Sugar

Tannin

Sarcocoll

Fecula

Glycyrrhizin

Inulin

Olivile

Hordein

Piperin

Lignin

Gum

(Of the same principles, but with the oxygen in excess, with respect to the hydrogen).

Acetic

Sinapic

Strychnic

Citric

Kinic

Morox, lic

Tartaric

Gallic

Benzoic

Ellagic

Malic

Pectic

Meconic

Fungic

Boletic

Acids.

Acids.

(Of the same principles, but with the hydrogen in excess, with respect to the oxygen).

Resin

Camphor

Stearin

Cerin

Elain

Myricin.

(Of hydrogen, carbon, and nitrogen).

Hydrocyanic acid.

OF ANIMALS.

I. *Binary.*

(Of oxygen and hydrogen).

Water.

II. *Ternary.*

(Of oxygen, hydrogen, and carbon, the two former in the same proportions as in water).

Sugar.

(Of the same principles, but with the oxygen in excess, with respect to the hydrogen).

Acetic

Formic

Acids.

(Of the same principles, but with the hydrogen in excess, with respect to the oxygen).

Resin

Cetin

Stearin

Ambrein

Elain

Butyrin.

Cholesterin

since Dr. Rostock drew, for the first time, any thing like an accurate distinction between some of the leading proximate principles of organized beings, (*Nicholson's Journal*, 1805), and it is since that time that the subject has been taken up by Gay Lussac and Thenard, Berzelius, Marcet, Brande, Prout, Chevreul, Gmelin, John, and so many other savans, that perhaps no branch of science at present offers, as M. Virey observes, a more "brillante carrière de nouveautés." It is true that many of these "nouveautés" are but the naked results of analyses undertaken apparently without any motive, and of which one at present sees neither the immediate advantage, nor the ul-

timate scope; but, perhaps, when some powerful and comprehensive mind shall have arisen to do for organic chemistry what Bichtat did for general anatomy, and Haller for physiology, we may be able more fully to appreciate the value of many facts, of which it seems at present that, in the words of Seneca, "Hic usus inventorum fructus est, invenisse."

(a) It is from the fungous and cruciferous orders of plants that some of the vegetable compounds which contain nitrogen are obtained in the greatest abundance; but there are few orders which do not afford, in greater or less quantity, compounds containing this principle.

III. Quaternary.

(Of oxygen, hydrogen, carbon, and nitrogen).

Osmazom	Solania
Sodo-albumen (a)	Atropia
Colouring matter	Hyoscyamia
Extractive	Daturia
Cathartin	Strychnia
Colocyntin	Emetia
Asparagin	Cinchonia
Gliadin	Quinia
Narcotin	Brucia
Zymom	Morphia
Fungin	Delphia
	Picrotoxia
	Veratria.

III. Quaternary.

(Of oxygen, hydrogen, carbon, and nitrogen).

Osmazom	Fibrin
Sodo-albumen	Casein
Colouring matter	Salivary matter
Piciomel	Hematosin
Urea	Lithic
Gelatin	Allantoic
Mucus	Cantharidia (b).

} Acids.

Of the foregoing proximate principles, but very few comparatively are described as entering into the composition of the tissues of either plants or animals, the greater number being found in the fluids alone. Among the former, however, are lignin, osmazom, sodo-albumen, and fungin, which are said to constitute, with much water, and a small proportion of certain salts, the principal tissues of plants; and osmazom, sodo-albumen, gelatin, and fibrin, of which, with a still greater quantity of water, and a similar proportion of certain salts, the chief tissues of animals are represented as consisting. Thus, it is of sodo-albumen and gelatin principally, that the cellular tissue, as well as the several membranous tissues, and the vascular tissue, in all its modifications, is described as consisting, as it is of osmazom and sodo-albumen, chiefly that the nervous tissue, and of osmazom, sodo-albumen, gelatin, and fibrin, for the most part that the muscular tissue are said respectively to be composed.

The following are some of the characteristic chemical properties:—

OF OSMAZOM.	OF SODO-ALBUMEN.	OF GELATIN.	OF FIBRIN.
Sol. in both water and alcohol, cold and hot.	Sol. in cold water.	Sol. in hot water.	Insol. in either water or alcohol, cold or hot.
Coag. by tannin.	Coag. by alcohol.	Insol. in alcohol.	Coag. spontaneously.
	— by heat.	Coag. by cold.	
	— by tannin.	— by tannin.	
	— by salts of tin, lead, mercury, & silver.	— by salts of tin and silver.	

Now the question arises, What claim have the animal compounds just enumerated—to say nothing, for the present, of those of vegetables—to be regarded as really organic elements, or the proximate principles of the organized animal body? The substance of such a body has been elsewhere represented as consisting of certain tissues, organized or unorganized, or anatomical elements, and of certain fluids; and it is commonly believed that such tissues and fluids are all immediately composed of more or fewer of these animal compounds, the simple or primary elements of which have been associated by secretion. It has, however, been already stated incidentally that, however true this doctrine may be with respect to the unorganized tissues and fluids, it is more than doubtful with respect to the organized tissues, the chemical nature of which appears to be entirely *sui generis*, but, nevertheless, such as, immediately upon the cessation of their vitality, to resolve them into some of the compounds under consideration. The organized tissues have never—as was at

(a) It has been considered expedient to designate by this name albumen in its uncoagulated state, since it is to the possession of its soda, as shown by Dr. T. Thomson, that it owes all the properties by which it is recognized. The term albumen strictly means coagulated albumen, since it is only upon the principle of abstracting its soda that all the agents by which the coagulation of this substance is effected, operate.

(b) In the above table those compounds

only are mentioned which result directly from the process of secretion, and are found native in the several tissues and fluids of organized beings; since with those into which they may be subsequently converted by various chemical manipulations, we have at present nothing whatever to do. The leading principles of the arrangement followed above are those suggested by MM. Gay Lussac and Thenard.

the same time remarked—manifested, while still possessed of their vitality, that globular structure which appears to be proper to sodo-albumen, gelatin, fibrin, and so forth; and it has been noticed from a very early period as characteristic of such tissues, that they resist, so long as their vitality lasts, the action of all those ordinary chemical agents which operate with the greatest energy on their reputed proximate principles. Does water, either cold or hot, act in dissolving, or alcohol in coagulating, an organized membrane, which is nevertheless said to consist principally of albumen and gelatin; or does either water or alcohol display any solvent action on an organized nerve or muscle, which is still represented as containing osmazome(a)? It is a distinguishing property of fibrin to undergo spontaneous coagulation; but no such coagulation takes place in muscles—which are still described as containing this principle—till they are deprived of their vitality, when they rapidly become stiff; and it is to this cause, and not to the contraction of the muscles, that the rigidity of the limbs, which soon succeeds death, and continues till the putrefactive process has commenced, is to be attributed. It is a process very similar to that of the coagulation of the blood; the only difference consisting in this, that the blood stiffens, owing to the retention by its fibrin for a sufficiently long time of its identity, while the muscles stiffen, owing to the development in them of fibrin which they did not previously contain (b).

Again, various agents which are most active in corroding certain animal tissues when they have become disorganised, as the hydrochlorate of mercury and the nitrate of silver,

(a) Notwithstanding all this, we find chemists, in the accounts of their operations on organic matters, continually using the terms membrane, nerve, muscle, and so forth, as entirely synonymous with gelatin, albumen, fibrin, and the rest. Dr. Bostock, for example, says habitually, "*membrane* is soluble in this or that;" "*membrane* has a strong affinity for the tanning principle," &c.; "the action of nitric acid on *nerve* is so and so;" "pure potash dissolves *nerve*," &c.; "the *muscular fibre* is readily acted on;" and so forth. The grave-digger in Hamlet spoke more "by the rule" in these matters—"one that *was* a woman, but, rest her soul, she's dead."

(b) That the seat of this rigidity is the muscles is obvious, since it ceases immediately upon their being divided; but Hunter, Nyström, and most late physiologists have been mistaken in ascribing it to muscular contraction, excited by what Hunter calls "the stimulus of death," as is clear from the facts, that it does not take place till some time after death, whereas such contractions should be most powerful immediately on its occurrence, and that it takes place --and that even more quickly and remarkably--in weak subjects than in strong ones. That it is not obviated by palsy, or by the division of the spinal cord, although apparently a very strong argument against the notion of Hunter, is not really so; since the supposed contractions may be conceived to be quite independent of any stimulus naturally conveyed by the nerves. It has, indeed, been suggested by some chemical physiologists, that the contractions of muscles during life may be, to a certain degree, dependant on the coagulation of their fibrin; and Humboldt, Cuvier, and others, have supported the notion that the increased cohesion of muscles, under these circumstances, is attributable to this cause. Rudolphi accordingly endeavours to amalgamate the opposed doctrines, and ascribes the

rigidity of the limbs after death to muscular contractions, "excited by a chemical operation." The "chemical operation," however, unfortunately for this *juste-milieu* hypothesis, does not take place till the susceptibility of contraction has ceased—to say nothing of the probability that such a coagulation of their fibrin, far from effecting, would be incompatible with the contraction of muscles, or of the absolute superfluity of the presumption of any such contraction to explain the phenomenon in question. It is remarkable that this rigidity is prevented by most of the causes which prevent the coagulation of the blood; a circumstance which, while it favours the presumption that it depends on a strictly chemical cause, is not at first sight easily reconcileable with the hypothesis that the latter is prevented, in these cases, by the fibrin being inadequately re-composed, after its decomposition, owing to the congested state of the radicles of the veins, since this cannot apparently have any effect in preventing the development of fibrin in the muscular tissue upon the cessation of its irritability. It will appear, however, in future that the total want of muscular contractions, which likewise occurs after death under these circumstances, can be referred only to a defective deposition, owing to excessive irritation—such as that produced by electricity, violent exercise, an intense emotion of the mind, narcotic poisons, a blow on the head, and other causes of venous congestion—of that tissue on which the irritability of the muscles immediately depends; and if we are thus compelled to admit the defective decomposition of one tissue to explain one phenomenon, it is surely allowable to suppose that of another to explain the one under consideration, and to presume that the want of subsequent rigidity results from the defective deposition of muscular tissue, which is resolved into fibrin after death, only when perfectly prepared.

with respect to those which contain albumen, oxalic acid, with respect to those which contain gelatin and nitric acid, with respect to those which contain fibrin, have no action whatever on them so long as they retain their vitality; and even the gastric fluid, which so rapidly decompose, every kind of disorganized organic matters, and not unfrequently, after death, even the very surface by which itself was secreted (a), is totally inert with respect to such matters while still possessed of vitality. Hence seeds and small animals are well known to pass sometimes through the stomach and intestines of larger animals, and parasites even to harbour there for an unlimited time, without sustaining the least injury; whereas, had their vitality once deserted them, they would have been immediately digested. Lastly, what membrane, nerve, or muscle, under any circumstances of heat and moisture, ever, while it continues organized, runs on to putrefaction; and which of the compounds, of which they are severally said to consist, under the same circumstances is capable of resisting it (b)?

Have we not, then, a right to conclude that there is in reality no ready-made osmazon, no sodo-albumen, no gelatin, no fibrin in the organized tissues of animals, but only the same elements as these compounds contain, and even associated together, as they are in them, by secretion, but held together by a power quite distinct from common chemical affinity, in a state of combination peculiar to living matter; and that it is only at the instant of the cessation of the vitality of each organized tissue, that these compounds, or reputed proximate principles—which certainly exist from the first in the unorganized tissues and fluids—are formed—at that instant when the power called chemical affinity succeeds another power, which may be called vital affinity, by which it had been previously superseded, and common chemical compounds are all that is left of that organized mass into which the elements had been before combined? It is contrary to every principle, not only of philosophy, but of common sense, to admit the presence, in any substance, of a property which is never displayed by common chemical compounds, and, at the same time, the absence of all those properties by which such compounds are known, and still affirm that the chemical nature of this substance and of these compounds is identical. Upon what circumstance, if not upon a difference in their properties, can we at any time establish a difference in the nature of bodies? We know nothing of their *Υλη πρώτη*—nothing of any one of them abstractedly; and if asked what is osmazon, sodo-albumen, gelatin, fibrin, and so forth, what could we say but that each is something which has such and such characteristics, and which, when acted on by certain re-agents, manifests such and such phenomena? It is a mere truism, then, to say that organized tissues, which have other characteristics, and which do not exhibit, under the same circumstances, the same phenomena, cannot be of the same nature as they are; and, if this be admitted, it will be evident how mistaken must be the doctrine which regards the globules said to be found—at least after the cessation of their vitality—in the several organized tissues, and which, if they exist at all, are merely particles of sodo-albumen, gelatin, &c., as organic elements, or molecules, and inculcates that it is directly in them that the aptitude for life or vitality resides. The really organic elements, or molecules, are probably, under ordinary circumstances—that is to say, while the organized being not only possesses the aptitude for life, but manifests life itself—never for one instant the same, and are certainly such as to have entirely eluded, hitherto, all our attempts to overtake them. There has, nevertheless, been generally evinced the utmost unwillingness to admit that organized matter is, in its chemical nature, distinct from such as is unorganized, and that it is held together by a power distinct from common chemical affinity. Any compromise seems to have been commonly preferred to this: and endless modifications, by the supposed vital principle, of a chemical nature presumed to be common to all kinds of matter, and of a power presumed to be in universal operation, have been accordingly proposed by chemists to account for the peculiarities of such as is organized, without their having perceived that the proposed modifications were such as, not merely to qualify this supposed common nature, but to exclude it and establish a proper one in its place, and not merely to temporize with this common power, but to admit a proper one to counteract and supersede it (c). Organized matter, as on the

(a) This action of the gastric fluid was noticed first by J. Hunter, (Phil. Trans. 1767), and has been since illustrated principally by Baillie, Adams, Home, Burns, Meckel, Haviland, Gairdner, Want, Pascalis, Cheeseman, Ségalas, Beck, Travers, Cramp-ton, Davis, and Carsewell.

(b) So striking is the attribute of organized tissues of resisting putrefaction, that it has been regarded by some physiologists, for example, Stahl, Junker, and J. Hunter, as furnishing one of the best means of de-

fining life. Such is not the case; but it is nevertheless a necessary property of the composition of a living being. Life is certainly "*Putredini contraria*;" but we cannot with propriety regard it, as Junker does, as consisting in "*illud putredini contrarium*." The resistance of common chemical re-agents is coincident with life, but not identical with it.

(c) Thus, to cite the expressions on this subject of only a few of the most celebrated chemists of the present century, Chaptal

one hand, possessed of properties which have no parallel in such as is unorganized, and, on the other, destitute of those by which the latter is characterized, must be regarded as quite distinct from it; and chemical analyses accordingly must be considered as useful in showing us, not what such matter *was* composed of while it possessed vitality, but what it is composed of afterwards (a).

describes living bodies as all subject to the influence of common chemical powers, but the effect of these, he says, "is modified by the re-action of the vital principle;" (*El. of Chemistry*, 1800). Dr. Thomson speaks of these powers as being, in the living body, not super-added by, but "the servants of a superior agent, which directs them so as to accomplish always one particular end;" (*System of Chemistry*, 1817); by Dr. Murray, the parts of the living body are described as common chemical compounds, the result of common chemical affinities, "which have been exerted merely under peculiar circumstances;" (*System of Chemistry*, 1819). Dr. Dewar observes that the materials of which living bodies consist, are not in the least withdrawn from the influence of the chemical laws which belong to other matter, but "new laws are superadded by which the effects of these common laws are in the most important manner changed;" (*Ed. Med. and Surg. Journ.* 1821); and Dr. Henry, while he admits that there is, in the living body, "a directing principle superior to, and differing from the cause which has been termed chemical affinity," with singular inconsistency at the same time presumes, that "the processes of chemistry, performed on dead animal matter, exhibit its proximate principles in a state identical with that in which they exist in animal structure;" (*El. of Exp. Chemistry*, 1823)—as if a directing principle, confessedly different from common chemical affinity, could be conceived of, as producing nothing but common chemical compounds. It is needless to multiply examples of this attempt to reconcile the simultaneous existence and action of contradictory powers—this "vital principle," this "superior agent," these "peculiar circumstances," these "new laws," this "directing principle," are only other words to express a new power, which not only restrains and controls, but opposes and dispenses with common chemical affinity; and which, as giving rise to forms of matter quite distinct from all others, is justly entitled to be regarded as entirely *sui generis*. Mr. Mayo considers it as "highly probable that the laws of chemistry, and the property which controls the affinity of matter in living bodies, will prove eventually to be identical." (*Outlines of Human Physiology*, 1827). Perhaps they may—but in the meantime we must be allowed to consider them as perfectly different from each other, since it is by

their fruits only that we know either, and the fruits of the two are certainly—as far as they have been hitherto ascertained, as different as can well be imagined.

(a) Berzelius is among the few chemists—for he is a physiologist as well as a chemist—who have admitted this almost self-evident fact. "Les elements," says he, "paraissent obéir dans les corps vivans à d'autres lois que dans les corps morts"—(*Traité de Chimie, par Jourdan*, 1829)—not newly modified, but other laws—but among professed physiologists the admission has been almost universal. Thus Rudolphi expressly states that chemistry is able to investigate only the lifeless remains of organized beings. (*Grund. der Physiol.* 1821). Dr. Barclay—one of the strongest advocates for the existence of a vital principle—concedes to it with respect to chemical affinity, not only, like Choptal, a modifying, but a subversive influence; and remarks that the combinations of organized matter "not only indicate a species of chemistry unknown to man, but evidently imply a species of chemistry whose modes of operation are equally beyond his powers to imitate, and his powers to comprehend." (*On Life and Organization*, 1822). Adilon again speaks of vital affinity, contrasted with common chemical affinity, as "une force toute opposée;" and very justly demands, "les molécules qui forment les solides du corps humain, étant associées en vertu d'une affinité spéciale, dite vitale, et que les chimistes n'ont pas en main, comment ces chimistes pourraient ils prétendre faire une analyse de ces solides? Ils ne font que les détruire." (*Physiol. de l'Homme*, 1823). It may be noticed as singular, also, that Dr. Pritchard—one of the most successful opponents of the vital principle doctrine—still quite coincides in opinion with Dr. Barclay, on the subject in question, and maintains that "the component materials of the dead and living body are not existing under the same chemical circumstances." (*On the vital principle*, 1829). Finally—for the list need not be prolonged—Tiedemann describes the combinations of organized solids as depending on forces proper to their bodies: and admits that it is not till after death that chemical affinities enter into play; (*Physiologie*, 1831); and a similar opinion is now entertained by almost all who are capable of forming an opinion upon the subject.

LECTURES
ON THE
PHYSICAL EDUCATION AND DIS-
EASES OF INFANTS,
FROM BIRTH TO PUBERTY,
BY DR. RYAN,
*Delivered at the Medical School, Westminster
Dispensary, Gerrard Street, Soho;
Session 1834-35.*

LECTURE XXVII.

Congenital Excess of Parts—Hypertrophies.

THE foetus is sometimes born with hypertrophy, or excessive development of organs, with supernumerary parts, or with various excrescences. The brain has been so large as to resemble hydrocephalus (Chaussier), the heart, liver, spleen, kidneys, pancreas, and other abdominal organs, the prepuce and nymphæ, have been hypertrophied at birth, and M. Duges applied a ligature in two cases on a prolongation of the hymen beyond the vulva.

Infants have been born with six, eight, or ten fingers and toes on each extremity. M. Duges saw seven and eight fingers on each hand; and M. Gardien the usual number of fingers and toes doubled. Deformities of this kind are hereditary in some families. I have usually seen two thumbs on each hand, and on one hand only.

It is on record, that one individual had two tongues, two hearts, two spleens, &c.

When supernumerary fingers are attached by a simple pedicle, they may be removed with safety, as attested by M. Duges, who performed the operation; but if the supernumerary part be united by a complete articulation it should be allowed to remain.

Excrescences and tumours may exist on any part of the body at birth, and are erroneously ascribed by the vulgar to the influence of the maternal imagination. Some of these may be removed by ligatures; others are beyond the means of art.

It sometimes happens that a fungus forms after the falling off of the umbilical cord, which bleeds freely. This varies in size and is pedunculated. It is accompanied by a purulent or sanguineo-purulent discharge, and has been mistaken for hernia-epiplocele. Some practitioners advise a ligature, others cauterization with nitrate of silver, and more excision. In most cases I have found a saturated solution of alumen, 3s to the 3j of distilled water, with a compress of soap plaister and a bandage sufficient. I shall more fully describe excrescences when enumerating diseases of the skin.

Congenital defect—Diminution, or destruction of Parts.—Every part of the body may be defective or absent at birth. An infant may be born with one or both eyes or ears want-

ing, one of the thoracic or abdominal organs, an arm or a leg or both absent, or have one hand or foot, or one very much diminished in size. The heart, the greater part of the brain, an eye, ear, or the genital organs, are sometimes absent. M. Dumas describes a case of a person who had no legs, but the feet articulated with the thighs at the knees. I have seen a person whose upper extremities were wanting, and who had a small tubercle like a wart on each shoulder. I have seen a tumour of this kind over the site of the genital organs. Others have observed examples of absence of the thighs and legs, and the arms and forearms, and the hands and feet naturally developed. (Duges). This learned author also saw an infant whose arms terminated at the elbow. Though the greater number of these deformities are incurable, we ought to supply the want of organs when possible. Thus we see persons with an artificial eye of glass, an ear or a nose of silver, a steel substitute for a hand. Captain Derenzy has described a variety of instruments for persons who have lost one hand, in his work entitled "Enchiridion." A great many deformities of club feet, which are so detrimental to locomotion, progression, or walking, may now be remedied by art; and so great is the advance of science in this particular, that indeed I have not seen a child with perfect club feet for some years. This is a vast improvement. It is deplorable to witness a fine athletic man hobbling his weary way, whose health is injured, and whose life is shortened by the ignorance of the medical practitioner who was present at his birth. Even the illustrious Byron could not forget an infirmity, which, had he known it was, perhaps, the result of medical ignorance, he would have satirised in imperishable stanzas. There are some forms of clubfoot which cannot be remedied; but a great number of cases admit of relief. This must be obvious when we bear in mind the facility there is of moulding into proper shape the imperfectly ossified bones of a new born infant. I have now treated six cases successfully. Different parts of the foetus may be destroyed by gangrene during intra-uterine existence. This is proved by the detection of the gangrenous parts in the liquor amnii. (Chaussier, Adelon, Velpeau).

The extremities may also adhere to the trunk at different points. The head may be very defective.

Acephaly.—Acephalous infants appear with the greater part of the head absent. They generally survive only a few moments after birth; but there is invariably some portion of the brain or cerebellum in the base of the skull. The foetus appears a shapeless mass, attached to the umbilical cord, and contains some vessels and nerves, with a portion of the intestinal canal. In other examples the inferior extremities, with some of the viscera

and a part of the spine, but not the heart or lungs, exist. (Elben, Breschet, &c.)

In many the superior extremities, thorax, and trunk are developed, while the other parts and the head are atrophied; and these have been called by Geoffroy *crypto-cephalous* and *coecy-cephalous infants*. In all cases a portion of the head, covered with hair, is apparent; and this fact led Beclard and Duges to conjecture, that the head existed before the other mutilations took place.

In some cases the skull is flattened on a line with the face. The term *microcephaly* has been applied to this deformity. This diminution is ascribed to hydrocephalus, with rupture, or to hernia, or *hydrencephalocoele*. It may also arise from the pressure of tumours on the foetal head, or upon pressure applied to the abdomen of the mother in the first months of pregnancy, which Geoffroy has termed *thlipsencephalous*.

In other cases the pressure is applied on the face, which may be entirely wanting (*anopsy* or *aprosopy*), or it may be reduced in its inferior part (*synoty*), but it is most frequently at its superior part, the cranium at the same time projecting forwards, and the eyes approximate more or less, or unite (*synopsy*), or are confounded (*monopsy*). We sometimes observe cases in which a hydrocephalus bursts, the fluid finds its way between the bones of the face, separates them, destroys the olfactory and other nerves, and even one eye. A foetus with one eye (*monospy*) may live a few hours, but seldom longer.

Anencephalous infants are those in whom the brain is displaced or entirely absent. In some the brain and upper part of the spinal marrow are absent, and the cranium unites to the neck or cervical vertebræ; the trunk is curved, and the abdominal viscera form a kind of protrusion or umbilical hernia. *Anencephalous* infants shew very slight signs of life, according to Lallemand.

All these deformities are said to depend upon a primordial conformation (Gall), on an arrest of development (Meckel), on a local inflammation (Blandin), and on a hydrocephalus followed by rupture (Morgagni, Chaussier, Beclard, Duges, &c.) It is easy to understand that the serosity or water, as it is improperly called, may distend the brain, rupture its membranes, separate the bones of the cranium, burst the scalp, and finally escape into the amniotic fluid. The whole brain, membranes, bones and scalp are destroyed by absorption, and the base of the skull alone remains, forming the *acephaly*.

Malformation of the Eyes.—The following account of these deformities in man and animals is by Dr. Seiler of Dresden, translated from his work published in 1833, and entitled *Beobachtungen, Ursprang-icker, Bildungsfehler, &c.*

The first part of this production contains the most remarkable instances of every

species of general malformation of the eyes, as to situation, dimensions, &c. They are ranged under several heads, which are as follow:—

1. *Number of Eyes.*—Some authors, more or less ancient, have spoken of individuals who had more than two eyes; but these are not to be credited. Not so, however, of those related by Walter and Rudolphi, in which one eye occupied its normal situation, while the other was wanting. This is not to be confounded with *cyclopia*, in which both eyes are more or less joined in one, and placed in the centre of the forehead. M. Seiler proposes to call the former case “perfect monophthalmia,” and the latter “imperfect monophthalmia.”

2. *Situation of Eyes.*—The most remarkable anomaly is the cyclops (*monopsia*, *rhinencephalia*).

3. *Dimensions of Eyes.*—The globe of the eye may be too large (*megalophthalmia*), or too small (*microphthalmia*). The enlarged eye is more particularly observed in cyclopia, anencephalia, and hydrocephalia. *Microphthalmia* was first mentioned by Beer, and subsequently described by Dr. Peenitz, of Dresden.

4. *Complete want of Eyes.*—M. Seiler briefly mentions the various cases of this kind recorded. He describes one observed by Daniel of Halle, in 1765. He then gives an account of two monstrous children preserved in the Museum of the Dresden Academy; in both cases, the eyes were wanting: in the former, the orbits were only separated by a line; in the second, there was only one orbit. The different facts quoted by M. Seiler show, that we should not generally maintain that when an organ is wanting, its nerves do not exist: they also show that eyes may exist without optic nerves or retinæ, and that the different parts of the nervous system do not so much depend on each other, as that a nervous branch cannot be developed without being connected with the brain by its trunk. Kliakosch found branches of the fifth pair in monsters, in whom the trunk of that pair did not exist.

Second Part.—Particular malformations of the parts of the Eye, Eyebrows, and Eyelashes.—They may be wanting, be too short, too fine, or have a vicious direction.

Eyelids.—They have been wanting, been too short, had a vicious direction, or been separated into two lateral flaps (*caloboma palpebræ*). Children have been born with the eyelids adhering to each other, or to the ball of the eye, (*anchyloblepharon* and *symblepharon*): this, according to M. Seiler, is a consequence of intra-uterine ophthalmia. In cyclops, the four eyelids are united round the one orbit.

Lachrymal Organs.—Their absence is often synchronous with that of the eyes; some

times one or other part of the lachrymal passages alone is wanting.

Muscles of the Eye.—When there is no eye, muscles are rarely seen. Supplementary muscles of the eye have been observed.

Nerves of the Eye.—Generally wanting when the eye is wanting. M. Seiler, however, found them all in an eyeless child. Sometimes the different parts of a nerve exist, but are separated from each other by want of immediate parts. At others, the neurilemma exists, but is not filled in the nervous pulp.

Sclerotic and Cornea.—The former has remained transparent, and not been distinctly separated from the cornea, which in some cases has been replaced by the sclerotic. The cornea is sometimes too small or opaque over a varied extent. Neophytes also exhibit webs, excrescences, or fungous tumour of the cornea.

Choroid, Corpus Ciliare and Pigmentum.—A case of absence of the choroid recorded by Klinkosch, is the only one known. Congenital division of the choroid has been more frequently observed, generally accompanying a similar defect of the iris. The pigmentum is variously abundant; its absence constitutes *leucæthiopia* or *Albinism*.

Iris, Pigmentum, Pupil and Pupillary Membrane.—Half or less of the iris has sometimes a different colour from the rest of the membrane. The pupil may be too small, too large, misshaped, wrongly placed. There may be two pupils in one eye—an anomaly more frequently seen in cyclops. The pupillary membrane is sometimes existent after birth. Congenital division of the iris, called *coloboma iridis*, by Walther, consists in an imperfect development of that tunic; the division commonly extends from the pupillary edge towards the lower part of the ciliary edge, and often corresponds with a similar division of the choroid and retina. The iris is sometimes altogether wanting; eight cases of this kind are cited by the author. He might also have quoted one from the *Archives Generales*, vol. xxv, p. 405, and from the *Journal d'Ophthalmologie*, vol. i, p. 490.

Retina.—Except in the Magendie's case, this nervous expansion has been found wanting on every occasion where the optic nerve is wanting. The retina has been sometimes observed to be turned backwards at its lower part; this accompanies congenital division at the iris and choroid. The nervous pulp of the retina may be also too liquid.

Aqueous Humour.—Has been too abundant, or turbid in neophytes.

Lens and its Capsule.—Lenticular and capsular cataract, are the only congenital diseases of these organs. In cyclops, two lenses are sometimes seen in one eye. M. Seiler gives an instance of its total absence.

Vitreous Humour and Circle of Zinn.—The vitreous humour is found too fluid, too copious or turbid. In a child five weeks old, Professor Ammon saw it wanting altogether in one eye, and too large in the other. In the former eye there was a ciliary ligament, but none in the latter; in this case there was an immense hydrocephalus.—*Dr. Ryan's Med. and Surg. Journ.* 1834, vol. vi.

Congenital Dropsies.—The term hydropsy, or dropsy, is applied to a collection of serous fluid in the three splanchnic cavities, the head, chest, and abdomen, and also when it exists in the eye, scrotum, spine, ovary, and other parts of the body, as in those cases when it is encysted or sacculated. The most common congenital dropsies of new-born infants are hydrocephalus, or dropsy of the brain, hydrorachitis, or dropsy of the spine, hydrocele, or dropsy of tunica vaginalis of the testicle, infiltration of the scrotum, hydrothorax, or dropsy of the chest, ascites, or dropsy of the abdomen, and anasarca, or general dropsy of the cellular membrane under the skin, which may occupy the whole body. The best and most elaborate account of dropsy in our language, will be found in Dr. Copland's Dictionary of Practical Medicine, a work that ought to be in the possession of every medical student and practitioner.

Congenital Hydrocephalus.—This disease is of rare occurrence, and is said to be caused by an original laxity of the brain, by a defect or arrest of development of this organ, during the first months of intra-uterine life, by the pressure of tumours on the head, or by the infliction of injuries on the abdomen of the mother, among which we include *tight lacing*. The disease is sometimes of frequent occurrence in some families. Underwood described six infants of the same father who were affected with it, and those died about the age of two years. G. Armstrong reports that he frequently examined the heads of different infants of the same family; and supposed that it was hereditary. This last opinion remains however to be confirmed.

The immediate or proximate cause of dropsies is, an increased exhalation, and a diminished absorption, so that the effused fluid accumulates. The equilibrium between the functions of the exhalent and absorbent vessels, essential to health, is destroyed, and an effusion of serous fluid is the result. The ancient writers considered debility the cause; while most of the moderns are of opinion there is a determination of blood, a congestion, or a subacute inflammation in the serous membranes, which causes the effusion. You will find ample information on the pathology of dropsy, in Dr. Copland's Dictionary of Practical Medicine, to which I refer you.

It is difficult to comprehend how either of these causes can affect the foetus in utero; but certain it is, that there are congenital dropsies.

Hydrocephalic infants have been destroyed by the compression of the pelvis of the mother during labour—a fact attested by numerous obstetric writers. M. Capuron relates a case which he attended with professor Marjolin, in which they were compelled to puncture the head, when three pints of fluid escaped. The mother had received two violent falls during pregnancy. A drawing of a hydrocephalic infant was lately shewn at the Medical Society of London. The mother had rupture of the uterus, and gastrotomy was performed unsuccessfully.

The infantile head is liable to great compression, when the amniotic fluid or waters escape prematurely, or when it presents in a preternatural or wrong direction. In such cases, the circulation of blood in the scalp and head is impeded, and the infant is born with the head swollen, or it may be killed by the pressure. The infant is still-born, the face livid, and unless the navel-string is allowed to bleed from one to four drachms or teaspoonsful, and other resuscitating means employed as formerly mentioned, the congestion of the brain will destroy it, or predispose to hydrocephalus. The scalp is often tumefied in such cases, and is to be relieved by cold applications, and when these fail, the effused or extravasated blood may be removed by an incision as already described. Tedious or difficult labours are therefore highly dangerous to the infant as well as to the mother; they should be always abridged and speedily obviated by medical assistance. In such cases, contusions, tumefactions or infiltrations appear after birth; and unless removed by cold and resolvent applications, leave a congested state of the brain, which sooner or later, more especially if the head be inordinately developed, or when dentition commences, will predispose to effusion, or “water in the head.”

There are other soft tumours and extensive congestions on the scalp, especially over the occiput, which are congenital, and do not induce hydrocephalus. Ruysch describes a tumour as large as a foetus, connected with the occiput, the fluid in which communicated with that contained in the ventricles of the brain. He also remarked, that such tumours do not always consist of fluid, but partly of solid cartilaginous or fleshy parts. Wepfer describes a similar tumour on the occiput of an infant who lived for some years, was seized with dysentery and catarrhal fever, and died, after convulsions and paralysis of the left foot. On examination it was discovered, that the tumour communicated with the brain through a round aperture in the occipital bone. The ventricles of the brain contained more than a pint of sanguinolent serosity. Soft tumours may exist on any part of the head, and be connected with the brain. I remember a case of an infant in the Edinburgh Infirmary, who had a round

tumour attached to the root of the nose, and this was tapped twice, but death followed. On dissection, it was discovered that this tumour communicated with the ventricles of the brain.

Hydrocephalus may be accidental as well as congenital. It is often caused after birth, by falls or blows on the head, by a repression or sudden disappearance of cutaneous eruptions, small-pox, measles, scarlatina, itch, &c., &c., by dentition or teething, by whooping-cough, inflammations of the organs in the chest, by irritation in the bowels, from worms, ulceration, disease of the liver, &c.

When fluid is effused into the ventricles, or between the membranes of the brain, it will cause compression of the brain, and derange or suspend its functions; a train of nervous symptoms follow, which we observe, when hydrocephalus supervenes after birth.

At first the infant evinces a sense of pain and weight in the forehead, it is giddy, dull, and disposed to lay down its head; it soon falls into a state of stupor or insensibility, its intellectual faculties are changed and deranged, the pupils are dilated and gradually lose their sensibility, the pulse becomes slow or rapid, the appetite is lost, and the alvine evacuations and urine are depraved. In a short time the cheeks become florid, the eyes dull, vision diminished or lost, the scalp hot, the forehead prominent, the nose depressed, and sometimes thin, the bones of the head and nose become soft and transparent, the eyes become prominent, the power of speech and of motion is suspended. All these symptoms are caused by the pressure of the fluid on the brain, which prevents that organ from supplying innervation to the different parts in the body. Compression of the brain, caused by depressed fracture of the cranium, or by apoplexy, produces partial or total suspension of sensation and voluntary motion. Van Swieten describes the case of a man, aged thirty years, who laboured under hydrocephalus from infancy, whose head was so large, that the muscles could not support it. His body was no larger than that of a child of ten years of age, was supported in the erect position with pillows. Nevertheless he enjoyed the functions of his senses, but was remarkably stupid. There was a lachrymation from one or both of his eyes. He was almost constantly uttering plaintive cries. I have seen a case at Limehouse, with Mr. Warden, of a child six years old, who was affected with congenital hydrocephalus; it was nearly deprived of the functions of the senses of vision, hearing, taste, smell, and touch, and entirely of the power of motion. It was supported in a chair with pillows, and its chin rested on a bar, without which, the head could not be kept in the erect position. The eye-lids were partially closed, the hearing very dull, the head very much enlarged.

the forehead prominent, the *æces* and urine discharged involuntarily. Littre, gives the history of an infant affected with hydrocephalus for two years, which slept very little, and scarcely ceased to cry the whole time. Such cases were long considered incurable, but it will immediately appear that this opinion was erroneous.

When the disease advances there is loss of vision, hearing, and memory, and sometimes the sufferer becomes epileptic or paralytic. Finally, coma, lethargy, or convulsions terminate the scene.

In some cases the effusion takes place gradually, the symptoms are obscure, the disease is protracted for a long time; and death is preceded by stupor only.

Congenital hydrocephalus is most probably the result of inflammation of the membranes of the brain (meningitis) during intra-uterine life, or of a defect of conformation which cannot be easily detected, and which may be compared to a kind of nutritive hypertrophy of the brain. The fact of the excessive development of the brain, hair, and cranium, in hydrocephalous infants, warrants the conclusion. The disproportionate size of the head to the development of the rest of the body, and the luxuriant capillary growth in such infants, confirm the validity of this opinion. Infants, after birth, with such peculiarities, are predisposed to hydrocephalus. In these the bones of the head have acquired great size and thickness.

There are different varieties of congenital hydrocephalus. The disease may appear in the embryo, and obliterate the whole brain, or distend it into a membrane, or even destroy the bones of the skull. In such cases there is nutritive hypertrophy, which supplies a superabundance of blood in the brain, augments the secretion of its membranes, and causes effusion. If we admit there is want of nutrition, and an arrest of development in monstrosities, we must also allow the existence of excessive development.

Drs. Monro, Shearman, and others, attribute the disease, after birth, to debility.

Congenital hydrocephalus consists in the effusion of serosity into different parts of the brain, or between its membranes. The fluid is contained in the ventricles of the brain, between the arachnoid membrane and the brain, the pia mater and dura mater, but never between the last and the brain. The position of the effused fluid led nosologists to divide hydrocephalus into two species, *external*, hydrocephalus externus; *internal*, hydrocephalus internus, hydrencephalus. (Monro tertius).

The effusion may be general or partial. In the latter the serosity accumulates in one or both ventricles; the tumour may be circumscribed in any portion of the arachnoid, but generally towards the summit of the head, at sutures, fontanels or occiput. The quantity of fluid may vary from a teaspoonful—

3j—to thirty-five pints. When a large quantity is effused the convolutions of the brain may be so expanded as to appear like a membrane. Tulpius relates a case in point; and adds that the patient retained the enjoyment of his intellectual powers until death—a statement opposed to physiology and pathology; and I should declare—an unfounded one. I have often observed illustrations of vast enlargement of the head, and extension of the convolutions in the brain, but I never witnessed one in which the intellectual powers were not greatly affected or diminished. When the effusion takes place suddenly, the bones of the cranium are separated, and the fontanels enlarge; but when it is effected slowly, the bones will sometimes present no trace of sutures, and acquire a remarkable size and thickness. Lassus states that they have been found so large and so thick as to be mistaken for the bones of a giant. Such was the state of the cranium of a child of nine years of age, described by Duvernay; and of the left parietal bone preserved by Ruysch as a curiosity, which was of such a prodigious size that it could cover the whole head of an adult.

The disproportionate size of the cranium, while the bones of the face remain in their natural state, constitutes the pathognomonic sign of chronic hydrocephalus. The disease has so advanced in the foetus in utero, that the fluid has destroyed the substance of the brain, the membranes, bones of the scalp, and their integuments, and burst into the cavity of the amnios, or that membrane which surrounds the foetus in the womb.

Hydrocephalus may advance rapidly or slowly in the foetus before or after birth. It seldom occurs after the eighth year, but may even at the adult period of life. But when it attacks children after the eighth year, or persons at puberty or the adult age, the quantity of effusion is comparatively small, and varies from a drachm to two or three ounces. It may remain stationary, and continue to a very advanced age. It was well observed by Camper, that infants, the bones of whose heads were not separated, lived longer (to adolescence or later) than those whose fontanels (openings of the head) were large, and the sutures of whose bones were separated. Van Swieten narrates the case of a man who survived for forty-five years. It was generally supposed that death was, sooner or later, inevitable in cases of chronic hydrocephalus; but the improvements in therapeutics during the present century disproves this opinion, as the disease has been cured by paracentesis cranii (tapping of the brain), by Dr. Conquest and Mr. Russell, whose reports will be given when I describe the treatment of the disease. Hitherto, it too frequently defied our resources, and when of long duration was deemed incurable.

It may exist in the new-born infant, according to Billard, without the presence of

any morbid symptom. It also comes on insidiously in children, whose intellectual powers are active, who have large heads and a great growth of hair, whose instinct and mind are precociously developed. In such the brain is inordinately developed, the cranium is large, and the hair luxuriant; and if the infant thus constituted receive falls, blows, or suffer much from dentition, hooping cough, inflammation of the lungs, irritation of the bowels called infantile remittant fever, worm fever, fever from the teeth, the ataxic or typhus of foreign writers, the irritation induced by any of these diseases will increase the flow of blood to the head, and predispose to hydrocephalus. So also with precocious mental exertion, as when parents and teachers most unwisely attempt to make children, as soon as they can speak distinctly, paragons of perfection in learning and the sciences. Mental exertion of this kind has destroyed thousands of children. But of its bad effects I have spoken on a former occasion, when observing the moral and intellectual education of infants.

Hydrocephalus may be erroneously supposed to exist in cases of infantile remittant fever, irritation in the intestinal canal caused by worms, congestion or ulceration of the bowels. The configuration of the head, the appearance of the hair, and the history of the case, will enable us to form an accurate diagnosis. It is a popular error in this country, entertained by parents, that every infantile disease is water in the head, vermination or worms, or dentition.

There is a disorder which resembles in many of its symptoms hydrocephalus, and which is often mistaken for it. This is designated hydrocephaloid affection, by Dr. Gooch, who, as far as I know, was the first that described it; also by Dr. Marshall Hall; and acute asthenic hydrocephalus by Dr. Darwall and others. It attacks delicate children. The symptoms are, heaviness in the head, tendency to coma, pale countenance, eyes half closed, eyelids rapidly closed and opened, pupils dilated, features relaxed, respiration slow, superior and inferior extremities cold. The causes of this disorder are diarrhoea, severe purgation or hypercatharsis, want of nutriment, or too copious bleeding by leeches, &c. It often follows ablactation or weaning. It requires to be treated with nutriment and stimulants, beef tea, arrow-root, &c., and a few drops of aromatic spirit of ammonia, or brandy in milk or arrow-root. The limbs should be enveloped in warm flannel, and their temperature raised by the usual means. If depletion, purgation, blistering, &c. were employed, the infant would perish. I lately directed your attention to two cases of this kind at the hospital, for one of which the late house-surgeon prescribed leeches, &c., a plan I countermanded, and substituted aromatic spirit of ammonia, &c., as I asked the mother, had not her

child suffered from severe diarrhoea, which was the case. In less than three hours you saw the child lively, and apparently restored to health. Cases of hydrocephalus are recorded by Quin, Cheyne, Warren, Gollis, Gooch, Callaway, and others, in which no fluid was found in the brain, though death was supposed to have been caused by effusion; and in these it may be presumed the affection was hydrocephaloid.

Dr. Darwall describes another species of this affection, which he terms acute asthenic hydrocephalus, in which the child complains of pain in the head, restlessness, &c., but all the symptoms being milder than in acute hydrocephalus. He has succeeded in curing this complaint by administering four grains of the compound ipecacuan powder (Dover's powder) every three hours until sleep is produced, and afterwards he continues the medicine twice a-day for a week.

At our next meeting I shall describe the pathology and treatment of congenital and accidental hydrocephalus.

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Reviews.

Traite Complet sur la Maladie Scrophuleuse; par M. A. Lepelletier, de la Sarthe, augmenté de Notes par Van Mons. A Treatise on Scrophula, by A. M. Lepelletier, de la Sarthe, with additional notes, by Van Mons. Brussels, 1833, pp. 318.

THE original Parisian edition of this work appeared several years ago, and went through more than one edition. The germ of the treatise is to be found in M. Lepelletier's inaugural thesis, published, as well as we remember, in the year 1817. On this monograph a most favourable opinion was pronounced by some members of the faculty of medicine of Paris; in their name M. Dumeril assured the author that further researches carried on in the spirit of, and with the perseverance exhibited in, those previously made, would form the groundwork of a most useful work. So encouraged, M. Lepelletier undertook and produced the treatise now under consideration. The Parisian edition was in two volumes, 8vo.; the Belgian editor and publishers have reduced it to a duodecimo: perhaps the rage for curtailing the garments of their female peasantry sways in the arrangement of the exterior of their books. We believe, however, that the whole matter of the former is to be found in the present edition; besides which, some very pertinent notes by Van Mons may be found.

Aromatic Fumigation.

Rx. Olibani,
Mastiche,
Succini, āā 3 iij;
Styracis, calan. ite, 3 ij;
Benzoini,
Tinct. opii, āā 3 j.

Fiat pulvis.

ELEMI.

This substance possesses the same properties as the preceding ones. It is scarcely ever used, except externally; it enters into the composition of several plasters.

STORAX.

This substance was very much employed formerly, but now it is scarcely ever used, except as a topical stimulant, or in fumigations. It enters into the composition of several officinal preparations.

The dose is from gr. x—3 ss, in pills.

FLUID STORAX

Possesses stimulating properties, but is used only in dressing wounds and ulcers.

Onguent de styrax composé. P. Employed in dressing ulcers and wounds whose borders are pale and unhealthy.

L'Onguent digestif of the H. de la Ch., is composed of two parts of the ointment of storax, add one part of the oil of olives.

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CHAPTER V.

MEDICINES WHICH ACT PRINCIPALLY
ON THE URINARY APPARATUS.

DIURETICS, &c.

NITRATE OF POTASS.

In large doses the nitrate of potass causes irritation to the gastro-intestinal surface; in smaller ones it is an energetic diuretic. It also appears to possess a sedative property, and it is used as a temperant as well as a diuretic in the second stage of inflammation of the urinary apparatus, in cases of jaundice, &c. It is sometimes used externally in gargles and lotions as a refrigerant.

[Nitrate of potass has been exhibited in fevers and visceral inflammations in powder or drink from time immemorial; also in dropsies, certain diseases of the kidneys, and when the urine deposits a pink sediment (lithic acid), in active hæmorrhages, mania, cynanche tonsillaris, in purpura hæmorrhagica, and in sea-scurvy. Its antiseptic property in preserving animal substances from putrefactive decomposition is universally admitted. It was given with the best effects in sea-scurvy by Mr. Cameron (Treatise on Diet), and caused a florid excretion. This writer appeals to Sir Wm Burnett, Director of the Medical

Department of the Navy, in support of his statement; and he further contends, with what justice I cannot pretend to determine, that it was from his reports Dr. Stevens received the hint of exhibiting saline remedies in yellow fever, typhus, cholera, &c. It is certain that nitrate of potass was given in barley-water, whey, and other diluents, and in powder combined with antimonials, in febrile and inflammatory diseases, long before Cameron or Stevens was in existence. T.]

INTERNALLY.—As a diuretic, gr. vj—xx in ℥j. of a mucilaginous vehicle.

As a stimulant, gr. xij—3 j. or even 3 ij.

Poudre tempéranta de Stahl. P. ℥j 3 ss.

Powder for making an ordinary Ptisan.
(Chaussier).

Rx. Potassæ nitratis, 3 ss;
Sacchari, 3 iv;
Extracti canini,
——— glycyrrhizæ, āā 3 ij;
Gummi acaciæ, 3 j.

Fiat pulvis cujus sumat cochleare minimum ex aquæ cyatho.

It is used in acute urethritis.

This powder is very useful for persons travelling.

Anticatarrhal Powder. H. Germ.

Rx. Potassæ nitratis, 3 j;
Pulv. spermatis ceti, 3 ij;
Pulveris iridis Florentinæ,
Sacchari, āā 3 j.

Fiat pulvis cujus capiat cochleare minimum secundâ quâque horâ.

Camphorated Nitre Powder. (Swédiaur).

Rx. Potassæ nitratis, gr. x;
Camphoræ, gr. iv;
Gummi acaciæ, ℥j.

Fiat pulvis in doses duas dividendus.

Diaphoretic Powder. H. of America.

Rx. Potassæ nitratis, 3 j;
Antimonii tartarizati, gr. j;
Hydrargyri submuriatis, gr. v.

Divide in chartulas v, quarum capiat unam secundâ quâque horâ.

Aperient Pills. (Swédiaur).

Rx. Potassæ nitratis, 3 vj;
Pulveris gummi acaciæ, 3 iij;
——— glycyrrhizæ,
——— althææ, āā 3 iij;
Syrupi simplicis, q. s.

Fiat massa in pilulas gr. v dividenda ex quibus sumat v ad vj ter in die.

In acute gonorrhœa, dysuria, &c.

[*Pulvis Potassæ Nitratis.* (Ph. Nosocom. Edin.)

Rx. Potassæ nitratis,
Sacchari purif. āā 3 iv;
Pulv. gum. acaciæ, 3 j.

Misce et divide in doses xxiv. T.]

Nitre ought to be combined with some

mucilaginous substance, as in this formula, though it is often ordered in saline and diaphoretic mixtures.

Boluses used in Cough. H. de Montp.

Rx. Potassæ nitratis, gr. xij;
Pilulæ cynoglossi, gr.;
Conservæ rosæ, ℥ij.

Fiant boli duo horâ somni capiendi.

An Antiphlogistic Drink. H. of Germ.

Rx. Potassæ nitratis, ʒj;
Decocti hordei, Oij;
Syrupi aceti, ʒj.

Misce cyathus singulis horis pro dosi sumendus.

In inflammatory fevers.

Diuretic Ptisan. H. of Italy.

Rx. Potassæ nitratis, ʒij;
Oxomellis scillæ, ʒss;
Decoti radicis asparagi, Oij.

Misce sumat æger cyathum sæpe in die.

An Emulsion of Nitre. H. of Eng.

Rx. Emulsionis amygdali, ℥ij;
Potassæ nitratis, ʒj.

Fiat emulsio, cujus sumat unciam singulis horis.

In inflammations of the genito-urinary organs.

In the *Emulsion nitrée* of the military hospitals, the quantity of nitre is three times greater.

Camphorated Ptisan. H. of Italy.

Rx. Potassæ nitratis, ℥j;
Camphoræ, gr. viij;
Sem. melonis, ʒij;
Aquæ fontanæ, Oij.

Cola et adde,

Sacchari purif. ʒij.

A wine-glassful may be given every two hours, to which a little lemon juice may be added.

[*Mistura Potassæ Nitratis.* (Pharm. Nosocom. Edin.)

Rx. Potassæ nitratis, ʒj;
Aquæ fontanæ, Oij.

Solve et adde,

Acidi acetici, com.

Syrupi simplicis, āā ʒiss.]

Mixture Rafraechissante. H. of Germ.

Rx. Potassæ nitratis, ʒss;
Aquæ, ʒv.

Liqua et adjice,

Aceti,

Syrupi aceti rubi idœi, āā ʒj.

Fiat mistura, de quâ capiat cochl. mag. secundâ quâque horâ.

Potion of Nitre. H. de la Ch.

Rx. Potassæ nitratis, gr. xvij;
Decocti, ʒiv;
Syrupi quinque rad., ʒj.

Fiat potio cujus sumat cochleare magnum singulis horis.

The dose of nitre is sometimes carried to 3 or 4 grains during the day.

The *Potion apëriente* of the H. des Vèn does not differ much from the above. It is composed of ℥j of nitre, ʒj of the syrup of five roots, and ʒv of the decoction of the same ingredients. Sometimes the syrup is replaced by the oxymel of squills, and in some cases, ʒiv of the acetate of ammonia is added.

In the *Potion diuretic* of the Hôt. D., the vehicle is white wine; and the dose of nitre is carried to ʒss, in Oij of liquid.

Antinephritic Mixture. H. of Italy.

Rx. Petal. papaveris, ʒvij;
Aquæ, Oij.

Coque ad ʒviij, cola et adde,
Potassæ nitratis, ʒj.

Misce.

Sumat ʒij, pro dosi, mane nocteque, ex cyatho decocto lini.

It is used with advantage in acute affections of the urinary apparatus.

Julep of the Nitrate of Potass. H. of Eng.

Rx. Nitratis potassæ,
Acidi nitrici alcoholiz. āā,
ʒij;
Syrupi limonum, ʒiv;
Aquæ menthæ, ʒxss.

Misce.

Capiat ʒj, bis vel ter in die.

EXTERNALLY. ʒj, ad iv Oj of water, in gargles, lotions, fomentations, &c.

Refrigerant Gargle. H. of Germ.

Rx. Potassæ nitratis, ʒij;
Decocti hordei, Oj.

Solve et adde,

Mellis rosæ, ʒij.

Misce.

Refrigerant Enema. H. of Germ.

Rx. Potassæ nitratis, ʒss;
Decocti lini, ʒv.

Solve et adde,

Olei lini,

Oxymellis simplicis, āā, ʒj.

Fiat enema.

Fomentation. H. of Italy.

Rx. Potassæ nitratis, ʒij;
Ammoniaë muriatis, ʒij;
Aceti, Oj;
Aquæ fontanæ, Oiv.

Compresses dipped in this liquid are applied to contusions, ecchymosis, &c. They should be renewed every hour.

[Equal parts of nitre and muriate of ammonia dissolved in ten or twelve parts of cold water, will answer the purpose of the above. T.]

SUBCARBONATE OF POTASS.

In large doses, and concentrated, it is a corrosive poison; in smaller ones, and in a proper vehicle, it is an excitant of the mucous membrane of the intestines, and a pow-

erful diuretic. It is employed in cases of gravel and other calculous affections, depending on a superabundance of uric acid; in passive hydrops, serofula, the gout, &c. It is used also in effervescent draughts. (*Vide Carbonic Acid.*) Externally it is sometimes employed as a rubefacient.

Subst. incamp. Strong acids, lime water, the sulphates of magnesia, copper, zinc, iron, alum, the hydrochlorate of ammonia, the chlorides of mercury, the nitrate of silver, the tartrate of antimony, &c.

INTERNALLY. Grs. x—3j, in a proper mucilaginous vehicle, or in white wine.

Poudre gommeuse alcaline. P. Grs. xij— \mathfrak{D} j and more, progressively.

Diuretic Ptisan. Hôt. D.

Rx. Potassæ subcarbonatis, 3j ss;
Saponis duri, 3 ss;
Potassæ nitratis, \mathfrak{D} j;
Gummi acaciæ, 3 v;
Infusi baccarum juniperi, Oj.

Fiat mistura, cujus sumatur cyathus, pro dosi.

Used by M. Récamer, in treating hydrops. It may likewise be used in gravel.

Tisane Alcaline de Mascagni.

Rx. Potassæ subcarbonatis, 3ij;
Aquæ, Oij.

Solve.

To be taken during the twenty-four hours, a spoonful at a dose, sweetened with the syrup of gum.

Recommended in chronic pneumonia.

Solution of the Subcarbonate of Potass. H. of Eng.

Rx. Potassæ subcarbonatis,
Aquæ destillatæ, āā p. e.

Solve potassam in aquâ, et per chartam cola. Gut. x ad 3j, sumat ex vehiculo apto.

As an absorbent, stimulant, and diuretic.

Absorbent Potion. H. of Germ.

Rx. Liquoris potassæ subcarbonatis,
Magnesiæ subcarbonatis, āā 3j;
Tincturæ cinnamoni, 3ij;
Aquæ, 3vss.

Fiat potio, cujus sumat cochleare tria, post cibum.

Julep of the Subcarbonate of Potass. H. of Eng.

Rx. Liquoris potassæ subcarbonatis,
3 ss;
Aquæ menthæ, 3 viij.

Misce.

3ss ad j, bis vel ter in die, ex vehiculo apto.

Potion Savonneuse. H. of Germ.

Rx. Liquoris potassæ subcarbonatis,
3 ss;
Olei amygdali, 3jss;
Aquæ, 3x;
Syrupi hordei, 3j.

Misce.

Sumat cochleare singula semihora.

In cases of poisoning by arsenic.

EXTERNALLY. As an excitent, or even rubefacient, q. q.

As an antipsoric.

3ij in frictions.

Liquor de Lous-carbonate de Potasse. P.

In lotions.

(To be continued.)

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REFORM IN THE COLLEGE OF PHYSICIANS.

To the Editor of the Original London Medical and Surgical Journal.

SIR—Will you allow a subscriber of your's, during the last seven years, a corner in your ably conducted and most independent Journal?—The proposed reform in the College of Physicians, of abolishing the distinction of grades is judicious, though it comes rather late, as there is no doubt but Mr. Warburton's bill would effect this. I cannot, however, understand how the College could license physicians who have not graduated as doctors, without infringing on the rights of the universities. If this were done, there would be an abolition of the doctorate. I cannot admit the soundness of such policy. I allow the medical education is much better in London than at our universities; but the preliminary education of students at Oxford and in London differs *toto cælo*. Every one will acknowledge, that a good general education is indispensable to medical practitioners; indeed all the witnesses before the medical committee at the House of Commons agreed on this point. Then comes a question, Have the medical students of London or the provinces received a proper preliminary education? I should fearlessly answer in the negative. Who will dissent from the poet, who says—

“ 'Tis education forms the human mind,
Just as the twig is bent, the tree's inclined.”

The proposed wholesale manufacture of physicians by the College, appears to me to be a set off against the rival institutions at Lincoln's Inn Fields and Blackfriars. It would wonderfully augment the funds of the College, but must eventually destroy the once respected degree of doctor, and before half a century demolish the College itself. But it is rumoured that the College is to grant degrees. This will be an anomaly never equalled. Some three or four gentlemen usurping the rights of universities! I question much whether the legislature will consent, though the present government might; and even this I consider very doubtful.

There is one thing certain, that the College must set its house in order. What a pity it neglected to do this a century ago! It is exactly in the same position as the old

Faculty of France, with which you so aptly compared it on a late occasion; but I, for one, think its case hopeless—*Nous verrons*—

Your's, obediently,

IATROPHILOS.

[There are so many rumours afloat about the intended reform in the Royal College of Physicians, that one half cannot be true. We know, however, that great changes have been proposed by the junior fellows, to which the senior would not consent. The reason is obvious. The few, perhaps the half dozen, who bask in the smiles of court, cannot appreciate the real state of opinion; the many who are clothed in scarlet gowns, and who are not exhausted by practice, take a different view of things. There is one thing certain, that unless the College make the most extensive alterations or reforms, its fellows and members will be annihilated. There must be some common sense amongst the fellows, though their past conduct too clearly shews it is trifling.—ED.]

THE BEST MODE OF ADMINISTERING
OIL OF TURPENTINE.

To the Editor of the Original London Medical and Surgical Journal.

SIR—In the last number of your truly scientific Journal you describe the best mode of exhibiting the oil of turpentine. If not out of place, would you be so kind as to receive a remark on the same subject from an old pupil, and to give to the consideration of your numerous readers the following formula?—

R_x. Olei terebenth., 3 iss vel 3 ij;
Magnes carbonat., 3 j;
tere et adde,
Aquæ menth. sativ., 3 v;
Syrup. limonis,
Spirit lavend. comp. āā, 3 ij.

Misce et divide in haust. iv, capt. j, ter quotidie.

This formula I have given with unvaried success for many years in gout and rheumatism, even to those who were previously disgusted by the taste and smell of turpentine, and also to those who, from acidity, could not retain it in any other form on their stomachs, (the violent chemical action that takes place on the admixture of turpentine and acids is familiar, though incomprehensible, to most medical men), being the cause in the greater number of instances why it is rejected. Some time ago, you made mention of something of the kind recommended by a French writer, as a novel mode of exhibiting turpentine. Now, I beg leave to say, that the Frenchman was forestalled by a pupil of your's, who prescribed the above formula, nearly two years ago, for Mr. Midgley, an eminent chemist in the Strand, who mixed his own potion and swal-

lowed it, and to whom your pupil refers you as his authority; and, if required, many more such references can be given by

Your's, most respectfully,

J. M. D.

Clapham, February 8, 1835.

PRESENT STATE OF LUNATIC ASYLUMS.

To the Editor of the Original London Medical and Surgical Journal.

[THE following letter, addressed to Sir Robt. Peel, Bart., on the present state of Lunatic Asylums, deserves the serious consideration of every medical practitioner, for all must admit that the present medical commissioners of the insane were badly selected, as they had little if any experience in treating those unfortunate beings labouring under mental alienation. They have not proposed any improvements in the treatment of insanity; they are controlled by the magistrates or lay commissioners to a shameful extent—country gentlemen, half-pay military and naval officers, &c. &c.]

We insert this document as the friends of humanity, and with the ardent hope that some of our influential readers will advise the Legislature or Government to improve the commissioners of lunacy. The medical part of these should consist of individuals who have devoted themselves to the study of mental disorders, and who from experience would be able to suggest improvements in the moral as well as the medical management of the insane. The present commissioners, "all honourable men," are the nominees of certain parties, but not one of them had sufficient knowledge of mental disorders before his appointment.]

To the Right Honourable Robert Peel.

SIR—There are duties which the more fortunate part of men owe to misfortune, and the history of your public as well as private life are sufficient to satisfy every reflecting mind that you are animated by this generous and exalted spirit. These duties you have in many instances performed with exemplary perseverance, wisdom, and humanity, and as a proof of this statement the revision of the criminal code will, I am persuaded, be regarded by your countrymen as a memorable and lasting illustration of your liberality and love of justice. You have seen that the virtuous as well as the vicious and abandoned may come within the grasp of these laws, and hence your anxiety to purify and simplify them. The ignorant are in these days instructed and taught to look forward to a better state. The slave has also been attended to and rescued from oppression, thralldom, and difficulty, as far as his intellectual improvement will admit of; but to the aid of those labouring under mental aberration—unquestionably the most unfortunate of the human species—no remedial hand, sufficiently powerful, has yet been

duly extended. Let me, therefore, implore your assistance in cleansing the Augean stable, and thereby directing the voice of humanity towards the relief of these our unfortunate and oppressed fellow creatures. Genius, mental aberration, and virtue, are often closely allied, and it becomes singularly humiliating to observe some of the most elevated minds not only overturned by these powerful susceptibilities, but degraded, trodden on, and insulted under this awful dispensation, as the consequence of the imperfection of the system of treatment to which they are subjected, combined with the apathy and cupidity of their immediate friends, who often neglect to provide or even grant them the use of their own resources, in contributing to their comfort and restoration to mental health. Those unfortunately labouring under this malady have as it were no protector, and are thus often placed at the mercy of the most unfeeling and rapacious part of human nature; and in this point of view the immediate friends of those so lamentably afflicted are not unfrequently to be regarded, because no steady efforts are enforced for the recovery of their deranged relatives, and when that event, their restoration to mental health, becomes improbable, no adequate attention due to the misfortunes and rank of the individual is directed to their comfort and wants. Nothing seems so anxiously thought of in many instances as the possession and division of the property of the deranged; and we may here remark that the present system of licensing and inspecting these establishments, instead of remedying these evils, has contributed to perpetuate them. The commissioners, with their late secretary, did no good to these unfortunate objects of their care; and mad-houses are never likely to improve while their superintendants are allowed to derive large emoluments from their professional intercourse with such receptacles. Among the traders in this line there are medical men, who are well known as participating in the emoluments of the mad-house keepers. What chance can a patient have of recovery under such a circumstance? Their superintendence, instead of being regarded as a system of virtuous and humane inspection, should be designated a system of corruption, negligence, and vile deception. The evils which were unfolded by the inquiries into the state of lunatic establishments afford ample proof of the careless, abandoned, and vicious measures which had extended themselves to these institutions. What could be expected when the guardians of the deranged were the retainers of the proprietors of lunatic establishments, and fed and supported as it were by their iniquities? It would well become the enlightened mind of the Lord Chancellor to direct his attention to this interesting subject of inquiry, in order to remedy the evils with

which the unfortunate objects of his care are afflicted. The most unprincipled scoundrel has a jury and a judge to aid his cause, but those labouring under mental derangement have neither friend nor assistant, but are in many instances exposed as it were to the full force of the pitiless and pelting storm. It may be here observed that there is a facility in depriving a fellow creature of his liberty under the imputation of mental aberration, which is altogether extraordinary in a country such as this. The certificate of a single respectable medical man should be sufficient to authorise temporary coercion when the patient unfolds propensities dangerous to himself or others, but such certificate should not, as at present, justify protracted confinement in a mad-house, or being sent to one, until deliberate inquiry shall take place. Before a step of such paramount importance is concluded, a solemn inquiry should be instituted, and that inquisition should consist of three or five, with powers to decide the question of sanity or insanity, and when insane, whether the individual so found should be sent to a mad-house or treated privately. With these preliminary remarks I now beg to place the following facts before you, as they are founded in many years' intercourse with establishments for the reception of the deranged, and are strongly corroborative of the necessity of erecting county asylums for the reception of those labouring under mental aberration. The patients sent to the lunatic establishments round London, and I may say throughout the British dominions, are, generally speaking, utterly neglected in a curative point of view. Diet, drink, classification, exercise, and cleanliness, which are of the utmost importance, are regulated by no fixed and judicious principles tending to the cure of the disease. No means are taken to employ the mind, and thus call it back to a state of health, by relieving it from the distressing scenes passing around it; so that from this want of attention the malady almost invariably assumes a permanent and incurable form.

No language can pourtray the horror to which the individual, who is only partially deranged, must be subjected to under such an arrangement. In this miserable and forlorn condition are they left from month to month, from year to year, forsaken by their friends, so that they become, in many instances, from the want of affection on the part of their relatives, a kind of property to their superintendants, who are interested in keeping them, and often unjustly representing them as mad. It here gives us no small degree of pain to state that these evils, as it were, in a great measure flow from the present system of inspecting and licensing madhouses. The clean and unclean, the noisy, those insensible to the calls of nature, the epileptic, the individual partially deranged, and the convalescent, are all blended

together by day, and often by night, so that rest, so essential for the refection of the powers of the mind and of the body, is utterly unattainable. There are often three, four, and five, deranged persons made to sleep in a small apartment, and in this most unhappy condition are they kept from eight in the evening until eight next morning. The gentleman, who has been accustomed to the decencies of life, and to shift his linen daily, must find himself in a most lamentable condition under such discipline. Such scenes and such treatment reflect eternal disgrace on the relatives of the afflicted individual, who are able to afford a plan of treatment more liberal and more likely to conduce to his recovery. It is not the proprietors of mad-houses that are, in many instances, to blame; but we again state that the disgrace attaches to the relatives of the deranged, who withhold such allowances as are absolutely necessary for the re-establishment of the mental health of their afflicted friends; a vigilant and well-conducted system of inspection would obviate these disgraceful evils. A proper system of inspection extended to paupers would not only benefit these unfortunate individuals, by restoring many of them to health of mind, but it would conduce to economy to an extent of which the public are not aware. County asylums, we again state, would contribute greatly to the comfort and recovery of those labouring under mental derangement, provided they are erected on an efficient plan, and that a proper system of discipline is impressed on them when they are in a condition to receive patients. The kind-hearted and benevolent Lord Robert Seymour, who possesses a thorough knowledge of the existing evils in the management of the deranged, has laboured in favour of these unfortunate men with a degree of perseverance, humanity and industry, that reflects the highest degree of credit on his character, and such conduct associates his name with the benefactors of the human race. It is devoutly to be hoped that his views may be carried into effect, as they are founded in experience and careful examination, which have enabled him to point out the means of remedying those evils that have been adverted to, and the existence of which are a signal disgrace to those who unquestionably have had it in their power to correct them long before the present period.

DEMOCRITUS*.

*. Justly holding in extreme abhorrence all kidnappers and lunacy fanciers, whether in the form of judges, masters in Chancery, doctors, lawyers, or mad-house keepers.

**The London Medical
AND
Surgical Journal.**

Saturday, February 14th, 1835.

**REFORMS IN THE COLLEGE OF
PHYSICIANS.**

WE are always delighted when we find anything in the opinions of our contemporaries to which we can assent, or anything in their conduct which we can commend. We have, accordingly, derived much gratification from the leading article in the Medical Gazette of last week, in which that journal fairly abjures a part at least of its former errors, and declares itself friendly to reform in the College of Physicians. Yes—the Journal which erewhile could detect no stain or blemish in this noble institution, has at length discovered that the guardians of its honour “have remained unmoved observers of the progress of society, and of the signs of the times;” the Journal which for years has villified the licentiates, and eschewed Edinburgh degrees, is now of opinion that all the members of the College ought to be placed on a footing of honourable equality. We heartily congratulate our contemporary on his conversion, and are not disposed, as some less benign persons might be, to brand him with dishonesty and tergiversation; on the contrary, we hold that when a man has been all his life wrong, a sudden change to rectitude of opinion and conduct is a highly laudable species of inconsistency. Our green brother is now in the right way, and our only solicitude respecting him is, lest he should be led too far by the first impulse of new and generous sentiment—lest he should grow destructive, and become a medical *sans culotte*.

Certain measures of reform are, it appears, actually in progress in the College. The following announcement in the pages of our contemporary may, in some sort, be considered as official.

“At present it would be premature to

speak confidently of the result, particularly after the experience of last year, but we shall probably not mislead our readers in stating our conviction, that the first great changes in the shape of medical reform may be expected to emanate from the College of Physicians, and we have great reason to hope that they will be very much in conformity with the suggestions which have at various times been made in the pages of this journal. We do not mean that any thing which we have written has influenced the parties*, but that our opinions have derived their weight simply from being found to correspond with those prevailing among the most intelligent members of the profession who have directed their attention to the subject. The improvements, which we greatly hope will have passed through their first stage before the present number of our journal is published, consist in establishing an educational curriculum, and in taking from the English graduate his admission to the Fellowship as a matter of course, and in removing from other graduates the ban of exclusion which has been so long put upon them. All who completed a certain course of study, and attained a certain age, would thus, in the first instance, be licentiates, and all, after a certain time, be equally eligible to the Fellowship."

The Gazette anticipates some difficulty in converting the existing licentiates into fellows; but expresses a hope "that a large and free admission into the fellowship will be made at the outset—say of all respectable men of ten years' standing in the College." It is added, however, that "the objections to admitting all the licentiates are great and insurmountable, some of them being men who, never having had any adequate education, ought not to have been licensed by the College at all." On this we have only to remark, that if the want of proper medical education be a valid reason for not letting some of the licentiates in, it is an equally valid one for turning some of the fellows out; since the education implied in the possession of a medical degree from Ox-

ford or Cambridge is in no respect superior to that testified by a degree from Aberdeen or St. Andrew's. If the College has been unprincipled enough to let loose unqualified men upon the public, it would be cruel indeed to allow this *now* to operate to the prejudice of individual members of the profession.

We further learn that the College has "at length opened its eyes to the absurdity of compelling students aspiring to the highest honours in medicine to leave the metropolis, where, more than in any other part of the kingdom, opportunities of studying to advantage exist." Hereupon our contemporary reminds the College that it has the power of licensing persons as *physicians* who have no *degree*; and remarks, that "being physicians would place its members in public estimation, on the same footing as Doctors in Medicine: a physician without a degree would at most be but a nine days' wonder."

But the plan to which the Gazette gives the preference, is that of investing the College of Physicians with the power of granting degrees.

Now, on the one hand we see no reason why the town should be frightened from its propriety with Doctor *Sangrados*, and on the other we see a number of reasons why the power of granting degrees should not be given to the College of Physicians *alone*. Why not entrust this power to such a board, as was recommended by many of the most eminent physicians and surgeons in this metropolis before the Parliamentary Committee. It might consist of the College of Physicians and six recognized Lecturers on the different branches of medical science, who ought to be chosen by ballot every year. It is obvious that no individuals are so competent for the office of examiners as those engaged in teaching, and such are the examiners at all universities.

The annual election of Professors, according to seniority, would preclude the possibility of monopoly in teaching,

* *Quære*—May not the parties have influenced our contemporary?

against which all the Lecturers examined before Parliament contended. But, in opposition to the College of Physicians alone conferring degrees, we maintain the total incapacity of that body, as at present constituted, though we admit that they would interfere the least with the business of teaching, which is no doubt a point in their favour. If the sentiments of the Parliamentary Committee, and of all the Lecturers who petitioned the Privy Council against granting a charter to the London University, be borne in mind, we think there is no chance of any one of our medical schools obtaining the power to grant degrees, and that a reformed College of Physicians is likely to be the chosen body.

The favouritism which at present prevails at the College in the election of censors, renders such a board altogether unfit and incompetent to examine for degrees. It often happens that the junior fellows are the censors—individuals who have received the worst medical education in the kingdom, and who have little if any practical experience. It would be altogether preposterous to allow these men to grant degrees; and the necessity of associating with them some more competent persons is abundantly obvious. The admission of the licentiates to the fellowship will without doubt be an improvement in the constitution of the College of Physicians; but we will not deny that we regard any improvements in the existing medical corporations merely as steps towards an ulterior object—the establishment of one faculty, to which reforms in the present separate institutions will inevitably tend, though their influence may not be immediate. Thus, if the licentiates be admitted into the College of Physicians, its counsels will be directed by more enlightened views of medical science—men, a large proportion of whom have been educated and have practised both as physicians and surgeons, will see the intolerable

absurdity of recognising any distinction between these branches. Again, if a representative system can be introduced into the College of Surgeons, the superior intelligence of the general practitioners will soon begin to influence its proceedings; men who are, in effect, both physicians and surgeons, will spare no exertion to rescue surgery from the degraded state in which its present insulation has placed it, and to re-unite it with physic. The result of all this will be, that the two corporations will enter into a voluntary coalition for the formation of one great national faculty, and the monkish ignorance of the twelfth century will at last be dispersed by the increasing light of science—leaving men to wonder that its shadow could have stretched forward through so many ages of advancing knowledge.

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HOMŒOPATHY AT A DISCOUNT.

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THE following dialogue may serve to give some idea of the opinion held in Paris of the homœopathic doctrine. It took place in the Académie de Médecine, at its sitting of the 27th January.

The Minister of Public Instruction announced to the Academy that the Homœopathic Society, recently formed at Paris, had petitioned the government for a licence by which its existence should be legalized. According to their project a dispensary would be immediately established, in which all the patients would be treated gratuitously according to the homœopathic mode, and on the accumulation of sufficient funds, a clinical hospital, for the purpose of teaching the doctrine and method alluded to, would be founded. As these projected establishments have particular reference to the public health, the minister requested to know from the Academy whether it would be advisable to grant the necessary powers; and remarked in conclusion, that “the question was not one of opinion alone on a point of science, but of medical police, which the government were anxious to have solved.”

To answer this, a committee composed of MM. Hussen, Remauldin, Gueneau de

Massy, Sherminier, Boulay, De Sens, and Sispane, was proposed. Upon which,

M. MAINGAULT demanded that the committee should be composed of an equal number of members who believed and of those who disbelieved homœopathy. (*Great laughter*).

M. DENEUX thought that M. Maingault should be called on to point out the believers to the academy. (*Laughter*).

M. ANDRAL PERE.—We have first to solve a preliminary question. I should wish to know whether a minister of public instruction can ask a learned society to frame a report on an absurdity. Did the rules allow it, I would move the order of the day on the minister's letter. At all events, I shall propose that the president or the secretary write directly to the minister, expressing freely what the academy thinks of the piece of trickery adorned with the name of homœopathic medicine; and I shall resist the appointment of any committee. (*Right, right*).

M. LONDE.—The secretary should be ordered to inform the minister that he is imposed upon, and that it would be degrading to the Academy to be engaged in the discussion of such quackery. You will see the advantage that will be taken of our present proceeding: to-morrow we shall see it published that the Academy is discussing the doctrine of homœopathy, and has framed a committee thereupon.

M. LEPELLETIER.—I think, on the contrary, that the formation of the committee is the surest means of annihilating homœopathy. Messieurs the homœopaths throw the gauntlet to us: we ought to accept it.

M. KERAUDREN.—It might be better if the Academy entered into communication with the societies in Germany. (*Great interruption*). In that country homœopathy has made the greatest progress. (*Interruption*).

M. MARC.—Such is not the case; homœopathy is a subject of the utmost contempt in Germany: so much so, that, speaking about it very lately with a celebrated Berlin professor*, he said, "There are only three homœopaths in Berlin; one is a knave, and two are ignoramuses." (*Laughter*).

M. BRESCHET.—Some months ago I was

in Germany, in company with nearly 600 medical men. Some one attempted to raise the question of homœopathy, but no one would hear of it.

M. RENAULDIN observed, that the Academy should, however, answer the minister; the more as he had taken the precaution to abstract the question of science, and only proposed it as one of medical police.

M. COMAC.—Were all the members that are opposed to homœopathy named, we should all be of the committee.

The names of MM. Andral *Pere et Fils*, and M. Adelon, were then added to those first proposed for a committee.

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INFLUENZA AGAIN PREVALENT.

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A CATARRH, signalized by head-ache, painful cough, great prostration of strength, and rheumatic pains of the limbs, is at present epidemic in London. It is of the same character as the influenza that prevailed in 1833, with somewhat greater development of true inflammatory symptoms.

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Hospital Reports.

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ST. GEORGE'S HOSPITAL.

Necrosis of the Femur—Operation.

FEB. 5th.—A man, of middle age, has been some months in the hospital, having been the subject of a chronic inflammation of the femur, which has terminated in necrosis. The lower part of the thigh was considerably swollen, and had two sinuses in it; one of which was in its lower and outer part, just anterior to the popliteal space. These sinuses discharged constantly more or less of an offensive sanious matter; and a portion of bone was felt denuded of periosteum, at their bottom, when examined with the probe. A week ago a consultation of the various surgeons was held upon the case, when the general opinion was in favour of an operation for the removal of the sequestrum, which, from the duration of the case, it was now thought would be found sufficiently loose; and it was then understood that it should be performed to-day.

Accordingly, at the usual hour, the patient was brought into the theatre, and Mr. Keate commenced the operation by making an incision, about four inches in length, along the outer part of the thigh, commencing below the middle, and terminating just above the external condyle. By this incision the integuments and large mass of the external vastus muscle were divided, and at the same

* M. Dieffenbach, we suspect.

time several muscular arterial branches, three or four, which were disposed to bleed profusely, but were at once tied. Mr Keate now proceeded to separate the muscle from the bone, in order to allow of space for the application of the trephine. This was now employed, and, after much labour, a piece of the external case of new bone was removed. Endeavours were now made to remove the dead bone with the forceps, elevator, and other instruments, but after much toil only a little fragment was extracted. The trephine was, therefore, re-applied, and, by the removal of a fresh segment of new bone, the opening enlarged. The attempts at the extraction of the sequestrum were now renewed, but without effect, and it was found necessary to have recourse again to the trephine, as well as to one of Hey's saws, before more than very small fragments could be removed. At last the labours of the operator were rewarded by the extraction of a large irregular mass of sequestrum. The parts were now dressed, and the patient removed to the ward.

From many circumstances in the case, sufficiently apparent, the operation was attended with peculiar difficulty, and occupied the entire energies of the surgeon for the space of nearly an hour.

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WESTMINSTER HOSPITAL.

Gun-shot Wound—Ligature of the Carotid— Necrosis of the Inferior Maxilla—Operation.

SAMUEL BRINNIGAN, aged 20, a native of Glasgow, was admitted into Northumberland Ward, January 7th, as a patient of Mr. Guthrie. He was in the service of Donna Maria during the Portuguese war, as a private in the regiment of Scotch Fusileers, and received a severe wound of the neck and face in an engagement at a village near Oporto, on March the 4th, 1833. It appears that a musket ball entered the left side of the neck, dividing the common carotid artery, and, passing diagonally across the upper part of the neck, emerged at the right side of the cheek, fracturing the angle of the lower jaw in its course. The artery was tied by Mr. Staff-surgeon Alcock, from whom he has a certificate. The wound in the face, by which the ball emerged, quickly healed, after two or three bits of bone had been discharged with the matter. About two or three months after the receipt of the injury, matter began to form about the angle of the jaw and summit of the neck, which broke through the skin and left a fistulous opening, which continues to discharge a glairy kind of pus, and is surrounded by a lurid patch of erythematous inflammation. Another fistulous opening also formed about twelve

months afterwards, about two inches above the other, and over the ascending ramus of the lower jaw. These fistulae are evidently connected with dead bone below. A very small opening also exists in the mouth, close by the last molar tooth of the lower jaw, and which discharges a little matter into that cavity. The patient himself says, that he thinks the ball must have passed through the mouth, as ever since he received the injury he has noticed a trifling loss of command over the motions of the tongue, and, as a consequence, a little impediment in his speech. This, however, is most likely owing to an injury of the hypoglossal nerve. There is considerable tumefaction of the cheek and neck around the diseased bone, and there has been a good deal of pain in this situation. Though of a delicate habit, at the present period his general health is good.

Feb. 3rd. During the last few days there has evidently been an increased degree of swelling and discharge, and the patient complains of more pain. The matter discharged is highly offensive. Mr. Guthrie said that he should in a few days endeavour to remove the dead piece of bone. The patient complains of a sensation giving him the idea of matter being confined within the cheek, particularly upon the sinus being probed.

7th. To-day Mr. Guthrie proceeded to the operation. He commenced by making an incision through the skin, the extensively thickened subcutaneous cellular tissue, and the masseter muscle, beginning at the upper sinus, and extending it outwards and downwards to the lower one. The bone being thus exposed, Mr. Guthrie endeavoured, by means of a strong knife and an elevator, to remove the dead portion; but after several trials, he only succeeded in getting away a small portion about half an inch in length. His efforts were now directed against a loose portion of considerable size; after the application of considerable force with the elevator and forceps, it was brought away, and was found to consist of a portion of the ascending ramus, and the whole of the condyloid process. It was entirely denuded of cartilage and ligament as well as of periosteum; it was almost of a black colour throughout, and was evidently in a necrosed state. There was, however, no attempt at its restoration, in the way of the formation of new bone. The wound was then dressed in the ordinary manner in such cases, and the patient sent to bed.

8th. The patient is going on well, and says that he has less pain than before the operation. Mr. Guthrie was gratified to find that there was no paralysis of the muscles of expression, of which he was apprehensive, considering that it was not unlikely that a main portion of the portio-dura might have been divided in the operation.

Abscess after Acute Rheumatism.

James Child, aged 54. was admitted Feb. 3d. into Northumberland Ward, as a patient of Mr. Guthrie. He is a carpenter by trade, of a stout make and plethoric habit, but states that he has uniformly been of temperate habits, and that during the last sixteen or seventeen years he has been quite exempt from ill health, until about a month ago, when he had a severe attack of acute rheumatism, from which he has just recovered. He has some recollection of having noticed a rather uneasy sensation in the right thigh; but whether it was connected with the present abscess he cannot say, as it either entirely disappeared during the arthritic attack, or was masked by its symptoms. During the convalescence, however, a swelling has appeared about the middle of the right thigh, on its anterior surface, which was attended with redness, heat, and pain; but there has been no rigors nor perspirations. He has been attending as an out-patient during the last few days, and has had poultices applied; and at the present time there is an evidently elevated and superficial swelling, affording a distinct sense of fluctuation, and covered by a livid coloured skin. The tumour is surrounded by extensively thickened integuments and other structures, giving it the brawny feeling of carbuncles. There is no appetite, tongue is covered with a whitish fur, and during the last two or three days there has been diarrhoea. The countenance is of a dirty yellowish colour; pulse 100, small and feeble. Mr. Guthrie made a free incision through the livid integuments so as to open the abscess, which discharged a large quantity of purulent matter—viz. about ten or twelve ounces. A linseed poultice was ordered to be applied, and the patient to take the following mixture:—

R_x. Quinæ. sulph. gr. xvj;
 Acid sulph. dilut. 3 ij;
 Tinct. cinchonæ comp. 3 ij;
 Infus. gentian. comp. 3 vj M.

Capt. cochl. ij ter in die.

6th. Considerable thickening remains in the structures surrounding the abscess, which has discharged matter pretty freely since it was opened, but has now nearly ceased to do so; it is now dressed with pledgets of simple dressing and a roller. To-day the patient has pointed out a fresh tumour, situated in the inner side of the calf of the opposite leg, in which there is redness, and heat, and pain, having a peculiar formicating character. There have, however, been no rigors nor perspirations, although the patient's attention has been directed to this point. A poultice has been ordered to be applied. The tongue is not nearly so much turred as at last report, and the bowels are moderately open. The pulse is 84, moderately full and strong. He continues the mixture.

7th. General health is improved; suppuration has not perceptibly advanced in the calf.

8th. The abscess in the calf is advancing towards the surface; general health good.

9th. The same as at last report.

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PROCEEDINGS AT THE COLLEGE OF
 PHYSICIANS.

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To the Editor of the Original Medical and Surgical Journal.

SIR—The company at the College of Physicians was informed by the learned President, that "in consequence of the exceedingly irritable state of the stomach and liver of the late Duke of Gloucester, no food could be retained in the former organ, and that *therefore* the royal patient sank." It is to be hoped that the major part of the Baronet's audience was composed of the unlearned in physic; otherwise it is hard to say whether the ignorance or the impudence of the reader was uppermost when he put forward the above exquisite piece of pathological reasoning: the chain of consequences is about as clear as that in the lines—

"He does not affect to dissemble his love,
 And *therefore* he kicks him down stairs."

Had the Baronet attended somewhat more to living, and less to dead languages, he might possibly have given us some more *modern* explanation of the cause of the death of his patient. As it is, the idea of death from the want of food, in fever, is precisely the converse idea of the old women that frequent almost all sick chambers, and lay it down, that if the patient "would but eat" he would soon be better—*therefore*, if he dies, he dies from the want of food: the prognosis of these old women is invaluable.

I need not take up the space of your Journal by shewing how the irritable state of the royal patient's stomach was connected with the unfortunate termination of his sufferings. There are few practitioners, I trust, who have treated a bilious or gastro-enteric case, who could not give a better account than that on which I have animadverted. It is lamentable to hear such trash proceeding from the head of a learned body, and pitiable to think that an enlightened Prime Minister, and some hundreds of educated professional men should have been obliged to listen to it.

Your obedient servant,

JULIUS.

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Foreign Medicine.

Rickets.

THIS disease is sometimes announced by a state of debility, before any visible deformity of the bony system. The children neither can nor will go on their feet: they cry and moan when raised from the recumbent posture: this is the first degree of the disease.

At a later period the respiration begins to be difficult: sometimes a periodical suffocating state comes on: the patients perspire a great deal, particularly about the head: at this point rachitism commences.

Rachitic children have a peculiar way of placing their legs when lying freely in bed. They keep them crossed and drawn up, so as to have the abdomen between the thighs. Their urine has an odour altogether peculiar—the odour of mice. Their tears and cries are also characteristic when the disease is somewhat advanced; and a practised ear may always discover the existence of the complaint by this sign alone. Such children are rarely thirsty, even when labouring under inflammatory fever, with or without local affection. The head is frequently enormous, besides the vices of formation it generally exhibits, and they are generally more intelligent than other children: watery head is exceedingly rare with them.

There are rachitic children who have, notwithstanding, every appearance of health: this is *rachitis florida*. They are for the most part of a scrophulous habit: in them the disease probably depends on an actual want of osseous matter. The treatment in this case is the same; but the prognosis is more favourable, and the little patients sometimes rapidly get well in the spring or summer.

Previous to undertaking the cure, all the accessory symptoms, as cough, diarrhoea, &c., must be removed: M. Goëlis then prescribes, and mostly with good effect, the following powder:—

Prepared powdered oyster-shells, $\frac{1}{2}$ an ounce.
Iron filings $\frac{1}{2}$ drachm.
White sugar 3 drachms.

Mix and give a pinch of it morning and evening.

Three times a week a bath of hay-seeds is to be had. For diet, the children are to take once or twice a-day an infusion of acorns with milk: beef-tea: no farinaceous food should be given. They should not be allowed to remain seated, or much carried on the arm; the recumbent position is the best: they should not, however, lay in feather-beds.

M. Goëlis says that it is wrong to suppose that the oxides of iron are better tolerated by the patient than the filings. Madder, even when used for a long time, has never with him produced the smallest benefit in the treatment of rachitism. The most disastrous complication of the disease is the whooping cough.—From "*A brief Account of the different Modes of Treatment used in the Hospital for Children at Vienna*," by Dr. Goëlis, physician of the establishment.

Chronic Tension of the Skin.

This disease (*cutis tensa chronica*), though by no means rare, is scarcely at all known. It is characterized by a peculiar shining red tension of the skin of the face, chiefly about

the mouth: or else of the palms of the hands, the soles of the feet, or the upper and inner parts of the thighs. Gradually the stretched parts become harder and wrinkled, the lips become covered with scabby crusts, which extend to the cheeks, and under these crusts an acid liquid is found, that corrodes the tissue beneath. Ulcerations of the thighs, about the genitals, the soles of the feet, and palms of the hands, also break out.

This disease is for the most part traceable to a syphilitic taint, and the treatment is quite in accordance with this theory; calomel is the only remedy, the specific. M. Goëlis prescribes it, in the dose of a quarter or third of a grain, according to age, twice a-day. For beverage he orders a decoction of heart's-ease in milk, and some he orders a bran bath.

The disease is however seldom removed without leaving its traces behind it: around the mouth particularly marks of it remain. Caries, or some other disease of the osseous system, not unfrequently follows upon it. In the milder cases it passes into *crusta lactea*.—*Ibid.*

Sanguineous Tumours of the Head.

M. Goëlis advises that these tumours, when met with in neophytes, should not be opened: he says that children frequently die in consequence of such an operation. These, as also subcutaneous lymphatic tumours and œdema of the scalp, he touches with nitrate of silver, to which he says they yield. In like manner he treats *navi materni* with lunar caustic, and eradicates them by producing suppurative inflammation.—*Ibid.*

Subcutaneous Lymphatic Tumours.

After using caustic to them, as in the last instance, if upon being open they are ill-looking, they should be sprinkled with a mixture of rhubarb and finely powdered charcoal, as is done in scrophulous ulcers.—*Ibid.*

DEATH OF BARON DUPUYTREN.

THE renowned surgeon-in-chief of the Hôtel Dieu expired on Sunday last, Feb. 8th, in the fifty-sixth year of his age, and in the possession of his faculties to the last moment. He was the author of several works on anatomy, physiology, pathology, surgery, gravel, and numerous other treatises. We were the first to render his admirable surgical lectures in our language. When he visited this country, he inspected all our great hospitals. On coming into the theatre of Guy's Hospital, Sir Astley Cooper turned to the large assemblage of students, and said, "Behold the first surgeon in the world."

M. Dupuytren gained the summit of fame by his ability and indefatigable industry.

His hour for visiting the Hôtel Dieu was 6 o'clock in the morning, and he remained until 10 o'clock. On arriving at that great hospital he put on an apron and pair of slippers, and then proceeded to examine every patient under his care with the greatest minuteness. He also dressed most of their ulcers. He had a roll, containing the names of the students, called over every morning, and if any one was absent three times, he ordered his name to be erased from the list. This was his plan when we attended his instructions. After having visited his patients, he repaired to the theatre, and delivered a clinical lecture on the most important cases under his care.

M. Dupuytren was profoundly learned in surgery. He was acquainted with the best works in English, German, and Italian, and quoted them in his lectures. His practice was most extensive for some years past, and he amassed a large fortune. He has bequeathed to the faculty of medicine 200,000 francs for the endowment of a professorship of pathological anatomy. The faculty are about to arrange in the New Hospital a museum of anatomy, which they propose to call Musée Dupuytren. He has bequeathed his body to MM. Broussais and Cruveilhier, who, with MM. Basnillaud, Delmas, and Marx, have performed the autopsy. The brain presented a great size. It weighed, after having been partly dried, 2lb. 14oz. In the right hemisphere traces of a former apoplexy were discovered. The heart was enlarged, and weighed 20 oz.; the usual weight is about 12 oz. The right cavity of the chest contained a quantity of serous fluid. The kidneys were softened and contained gravel. The body was interred at Pere la Chaise on the 11th inst.

MM. Sanson and Begin are deputed to prepare the eulogy, and M. Marx, his former pupil, is to edit his works.

—o—

CORRESPONDENTS.

- A Dublin Friend.*—We merely replied.
An Old Subscriber.—It interests very few.
Q. in the Corner.—Mr. Guthrie had nothing to do with it; but it happened in the school with which he is connected.
Scrutator.—Sir R. Peel is not cajolable. He effected more salutary reforms in the criminal law than any statesman in England. He will not listen to corporate proposals, for he well knows that medical reform is much more important to the public than to the medical profession. We entertain no doubt but he will be influenced by Mr. Warburton's bill.
A Bristol Friend.—Real medical Tories.
A Manchester Subscriber.—We have numerous friends at Manchester.
Z., of Liverpool; A General Practitioner, at Hull; C. D., of Nottingham; Galen, of Edinburgh; E., of Durham; Medicus, at Newcastle-upon-Tyne—Dr. Ryan's Lectures, and Translation of the Formulary of Hospitals, will appear regularly, if time permit.
Castigator.—A reptile beneath contempt.
The Portsmouth Cholera Gazette.—We have received fifty-four letters during the week, complaining that the Gazette is forwarded "free, gratis, for nothing," as a sealed double letter, to non-subscribers. The parties must be hard up, to adopt this proceeding. We advise our friends to send it back in the same shape, through the two-penny post.
A Reformer.—A physician of the London College, one of the "aliene homines," the "minus docti," has a right by the Act of Hen. VIII., which confirms the charter of the College, to practise surgery; and he may supply medicines, free of expense, without incurring the slightest danger of prosecution by the Company of Wholesale Druggists, who smuggled an act through Parliament, as the Apothecaries' Company.

WEEKLY METEOROLOGICAL JOURNAL.

1835.	Moon.	Thermom.			Barometer.		De Luc's Hygrometer		Winds.		Atmospheric Variations.		
Feb.													
5	D	47	41	36	29.93	29.76	60	55	S.W.	W.	Fine	Fine	Fine
6		41	48	41	29.96	30.06	55	57	N.W.	W.S.W.	Cloudy	—	—
7		47	51	43	29.76	29.59	57	55	W.S.W.	S.S.W.	Fine	—	—
8		43	47	35	29.41	29.44	55	54	W.S.W.	W.S.W.	—	—	—
9		36	41	30	29.57	29.64	54	52	W.	W.S.W.	Cloudy	—	—
10		34	38	30	29.92	30.12	52	53	N.W.	N.N.W.	Fine	—	—
11		33	46	33	30.18	30.01	52	61	S.W.	S.S.W.	Cloudy	—	—

50, High Holborn.

WILLIAM HARRIS and Co.

All communications and books for review are to be addressed (post paid) to Dr. Ryan, 4, Great Queen-street, St. James's Park, Westminster; or to G. Henderson, 2, Old Bailey, Ludgate-hill.

THE

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LECTURES

ON

MEDICAL JURISPRUDENCE,

DELIVERED BY PROFESSOR A. T. THOMSON,
F. L. S.,

At the University of London; Session 1834-35.

LECTURE XVIII.

Disqualification for Military or Civil Service.

GENTLEMEN—The next subject to which I have to direct your attention, is *Disqualification for Military or Civil Service.*

Every situation in life which requires active powers, implies a capability of exertion in the individual; but in these occupations which may be regarded as of a public nature, and in which the duties must be fulfilled, not as suits the convenience of the persons performing them, but the demands of the community, it is of importance to ascertain the capacity of the person engaging to perform them. In military service especially, the nature of the duties requires the fitness of the recruit to be minutely investigated, and the power of the soldier to perform them narrowly watched. On this account the qualifications for military service refer both to the admission to the service, and the performance of the duties during continuance in it. In the English army every recruit is examined by the regimental surgeon before he is permitted to join his corps, or, as the term is, before he is finally approved. He is stripped naked, in order to ascertain that he has the free use of every joint and limb; the perfect use of the various organs of sense; that he is not ruptured; is free from scrophulous affections of the glands; has no sores nor marks of old ulcers on his legs, nor varicose veins, nor diseased enlargements of the joints. No man deformed in his limbs is considered fit for service. Out of 30,603 conscripts examined for service in the French infantry, 36.2 per cent. were found to be unfit for military duty, in consequence of being deformed or infirm. It is even requisite that the recruit should have good teeth, to enable him to bite off the end of the cartridge. Many deformities of a different

kind, such as the ankylosis of joints, paralysis, and nodosities, impeding the free motion of the limbs, are obviously such insurmountable obstacles to the performance of the active duties of a soldier, that it is scarcely necessary to advert to them. Pulmonary consumption, whether already it have produced vomicae, or even a tendency to their formation, renders the person equally unfit to undergo the fatigues of a military service; and, therefore, every recruit unsound in such particulars must be rejected. It is scarcely necessary also, to mention *vertigo* among the causes of rejection: a man, with a loaded musket on his shoulder, becoming giddy in the ranks, might fall down, and, entangling the trigger of his musket in some part of his dress might shoot his neighbour, or any one near him: and if this be true of *vertigo*, it is still more so as regards *epilepsy*. Insanity, imbecility, dumbness, and blindness, are also very obvious adequate causes why a man should not be enlisted. Some other diseases are equally proper causes of rejection: such, for example, as gravel, requiring frequent evacuation of the urinary bladder, habitual incontinence of faeces, and fistula in ano. The most complete tables of diseases which unfit for military service are to be found in the French *Code de la Conscription*; and a translation of them is contained in Dr. Beck's *Elements of Medical Jurisprudence*, to which I beg leave to refer you. Mr. Marshall says, that recruits should not be approved who weigh less than the medium weight, namely—

At 17 years of age .	116 lb 9 $\frac{3}{4}$ averdupois
18	127 9 $\frac{1}{2}$
20	132 7 $\frac{1}{2}$
25	138 12 $\frac{1}{2}$

The mean height of the British infantry soldier is 5 feet 7 inches.

Men are generally more anxious to get out of the army than they were to enter it: but it is often, especially in time of war, politically wise to retain them with diseases which would have prevented their enlistment; and much caution is requisite to distinguish between true and feigned diseases, as soldiers soon become adepts in simulat-

ng diseases, to escape the performance of duty.

In noticing some of the principal simulated diseases, I will not confine my remarks solely to those put on by military impostors. The knowledge of feigned diseases, and the mode of detecting them, will be found useful in every situation, either public or private, which can be filled by a medical man. Many curious instances are recorded in the writings of Mahon, Foderè, Dr. Hennen, and Mr. Copland Hutchinson: and an excellent article on the subject is found in the eighth part of the *Cyclopedia of Medicine*, by Drs. Scott, Forbes, and Marshall. (Dublin Hospital Report, vol. 4; and the *Medical Gazette*, vol. vii, p. 238). All feigned diseases may be divided into two classes—*external* and *internal*. The principal affections intended to be simulated, which may be comprehended under the first class, are *ulcers, deformities, tumours, paralysis* of some member, *ophthalmia, blindness, and deafness*; those under the second, are *fevers, epilepsy, catalepsy, convulsions, syncope; hemorrhages* of various kinds; *affections of the heart, of the kidneys and urinary organs, dropsy, parietes, pregnancy, and insanity*. I will endeavour to give you a brief account of the mode in which each of these affections is simulated, and the method of detecting the imposition.

Ulcers have been at all times a fertile source of imposition, both in the army with skulkers, and out of it with mendicants. Formerly the credulity and ignorance of the public was easily imposed upon. A young woman went to the King of France, says Pigray, an old French surgeon, to be touched for a cancer of the breast: an imposition was suspected, and Pigray discovered it to be a slice of spleen neatly fixed on the mamma. The formation of real ulcers, however, is more common; they are produced by various means—incisions are made in the fleshy part of the leg, and copper coins imbedded in them, which soon brings on inflammation and the ulcerative process. They are also produced by the application of the recent root of several of the species of *ranunculus*, particularly the flammore, which possesses great acrimony. In the years 1812 and 1813, the number of patients in the Hospital at Sheerness with sore legs was alarmingly great; the surgeon, Mr. Robertson, suspecting some fraud, employed spies, and discovered that these ulcers were caused by a process termed, in the flash language of the place, *Far-hunting*, which consisted in rubbing the sand, used for scouring the deck of the hospital ship, with the thumb upon the skin, until it was rubbed down nearly to the bone. Mr. Robertson having cured half-a-dozen convicted of this practice, had them flogged, and never again was troubled with a feigned ulcer in his hospital since. The diagnostic symptoms between ulcers of this kind and real ulcers, are the absence of any constitutional disease, the

deficient callosity of the edges of the sores, and the generally more superficial nature of the ulcer than is usually found in the real state of this disease. The simulated ulcer is easily cured, by simply bathing the part with luke-warm water, and covering it with some clean lint. Ulcers formed with mineral acids are very difficult to detect: and those also formed with lime and soap.

Beggars frequently pretend to be maimed and deformed, with the view of exciting more compassion; but this is easily detected on stripping the patient naked: although sometimes, from long-continued disuse, and the keeping the limb always in the same position, contractions take place, and the member appears more emaciated than its fellow. In simulated ulcers the deceptions can be detected by closely watching the presumed patients, and observing whether the diseased appearances subside or disappear, when the opportunities of employing the hurtful substances are taken away. If the ulcers heal readily when the patients are closely watched, and re-appear when they are allowed greater freedom, we may conclude that our suspicions of deception are well founded, and means may be taken to expose or to counteract it.

Tumours of different kinds are imitated by blowing air into the cellular tissue. Thus it is blown under the integuments of the head, to give the appearance of hydrocephalus. A fraud of this kind, practised by a mendicant, is mentioned by Sauvages; it was discovered by removing the patch which covered the hole, and prevented the air from passing out. Nothing can be more easily detected than a fraud of this description, by remarking the absence of all constitutional symptoms; and even in emphysema arising from wounds penetrating the chest and lungs, which this species of inflation most readily imitates, the symptoms are very distressing: the patient labours for breath, his countenance becomes livid, his senses are stupified, and unless speedy relief be obtained, he falls a victim to the disease. Foderè mentions that a woman succeeded, by this method of inflation, in producing a remarkably excellent representation of ascites; but the symptoms which accompany dropsy being absent, she was soon detected: indeed, in these inflations there is the mere existence of tumour, with a quiet state of the system.

One of the most common simulated diseases is palsy; and such is the extraordinary self-possession of some individuals, that burning wax, moxas and heated irons, have been applied, in order to discover the fraud, without the smallest retraction of the supposed paralytic member being produced. Foderè gives two cases of this kind. (See vol. ii, p. 473.) I have seen some cases, and also remarked the stoicism with which the impostors bore to be pumped upon, pricked with needles, and many other pain-

ful applications, without the smallest appearance of feeling, particularly when they had reported that the members, besides being devoid of motion, were also insensible. Mr. Hutchinson recommends in these cases, when the patients belong to the navy or the army, and suspicion falls upon them, that an anodyne draught should be administered, and under its operation, that the nostrils be tickled with a straw; if the paralysis be not simulated, the healthy member only will be raised to the irritated part; but, when fraud is intended, both arms are likely to be employed, by shifting the irritation from one nostril to the other. A still more effectual method of discovering the fraud, is to drop some melted wax upon the paralysed arm or leg, just as the person is dropping off to sleep, under the influence of the narcotic. An excellent method is, to give the pretended paralytic an electrical shock, when he does not expect it; this rarely fails to expose the fraud. Whatever means are adopted, they should be put in practice when they are not suspected, when the pretended paralytic is off his guard: his stoicism, however sturdy, is not proof against unexpected pain, when the mind is not directed to the feelings of the body.

Ophthalmia is frequently simulated by soldiers, who wish to be exempted from duty, or to obtain a discharge from the service, by applying corrosive sublimate, and other irritating matters to the organ, sufficient to cause a considerable degree of inflammatory action in the part. In a paper by Dr. John Vetch, contained in the 4th vol. of the *Edinburgh Medical Journal*, we are informed that this practice was carried to a very great height in the 28th regiment of foot, at the time when the Egyptian ophthalmia prevailed in the British army. The manner in which this feigned ophthalmia may be detected is, by remarking whether it appear in one or both eyes; and, as it is produced in one eye only, we shall find that the affected eye, in general, is the right eye; unless the individual be left-handed, when it is as invariably the left eye. The simulated ophthalmia arrives at its acmè in a few hours; the swelling is chiefly in the conjunctiva, whereas, in real ophthalmia, the palpebræ are also much affected. In the simulated disease, when the sight is lost, there is rarely much organic alteration. By attention to these symptoms, the simulated disease can be readily detected.

Blindness is frequently simulated, not only by soldiers, but by mendicants. This is not so easily detected as is generally supposed, because, as Richter has ascertained, in true amaurosis the iris is sometimes sensitive to the stimulus of light, and contracts: but if, on throwing the reflected rays of the sun, from a mirror, upon the eye of a person supposed to be feigning blindness, no contraction of the pupil takes place, we may

then conclude that the disease actually exists; and, if the contraction be sudden and considerable, there is also some reason for concluding that the blindness is feigned. Short-sightedness is one of the disqualifications in the enlistment of soldiers, and is frequently feigned when men are drawn for the militia. The plan adopted by the French in ascertaining the truth in this respect, in men who wish to avoid the conscription, is ingenious. From knowing that short-sighted persons can read, by means of concave glasses, when a printed paper is brought close to his eyes, they put such spectacles on the noses of those who declare themselves to be short-sighted, and desire them to read a paper held close to the eye; if they can do this, the defect is admitted, but not otherwise.

Deafness and *Dumbness* have been occasionally admirably simulated; and it is difficult to detect the simulation. It may be done, however, by a little address; by relating something of interest to another person, whilst you are feeling the pulse of the impostor, or suspected impostor; the change in the countenance of the individual, and the effect which a consciousness of this being detected, produces on the pulse, generally leads an acute observer to detect the deception; and, if he can thus ascertain that the individual hears, the idea that he is dumb must fall to the ground. The plan which the celebrated Abbe Siccard pursued to detect an impostor who pretended to be dumb, may also be adopted. The Abbe required the impostor to answer a number of queries in writing, and finding that he spelt many words, not according to their established orthography, but according to the sound, he correctly concluded that he could not have been born deaf and dumb, because he wrote as we *hear*, and not as we *see*. But this proof would be rendered nugatory by a well educated impostor. I recollect, when a boy, being accessory to the detection of an impudent beggar, who had long levied contributions upon the public, on the plea of dumbness. It was agreed that whilst his attention was fully occupied by a fellow student, by conversing with him on the fingers, I was suddenly to prick his leg with a large needle, fixed to the end of a stick. The effect was electric; on feeling the puncture, he suddenly started and exclaimed—"Good God! what is that?" The sequel may be imagined: the impostor was turned out of the house, and was obliged to leave the neighbourhood.

Strictures of the Urethra have been so well simulated, that a bougie could not pass into the bladder, until the attention was deeply engaged in conversation, and of course withdrawn from the part. Had the confession of the individual who simulated this disease not confirmed the suspicions of Mr. Hutchinson, who has recorded a case of this kind, I confess that I should have been scepti-

tical with regard to this. In instances of *spasm*, where there can be no fraud, we find that much advantage results from abstracting the attention of the patient from the affected part. The same gentleman mentions another very singular instance of the power of volition over muscles not usually under the control of the will. A man was impressed into the navy, from on board a merchant vessel; and, to avoid being detained in the king's service, stated that he was ruptured in both groins: that he had been overhauled, that is examined, a dozen times by the surgeons of different ships of war, and as frequently discharged, as unserviceable.

"There certainly," says Mr. Hutchinson, "was a swelling in each groin, very much resembling hernia, but the weather at this time being extremely hot, and the scrotum therefore very pendent and flaccid, my attention was particularly called to it, and, on examination, I found the scrotum to be an empty bag, and the testes, of their natural size, lodged in the groins. As soon as this discovery was made, the poor man, from being at length and so unexpectedly detected, became quite unnerved, and so agitated, that, upon re-examining the parts, the testes were found to have descended into their proper places in the scrotum. After commending the man for his ingenuity, and, in place of physic, administering to him a glass of grog, his spirits were rapidly restored; and, seeing no longer any chance of eluding the king's service, he displayed before us several remarkable feats of the power which he possessed over these organs. He pulled both testes from the bottom of the scrotum up to the external abdominal rings, with considerable force, and again dropped them into their places with incredible facility." He could elevate the testicles either singly or together, and drop them in the same manner.

This power of the will is not confined to the moving organs, but sometimes extends to the nervous system. Women have appeared to be in so deep a magnetic sopor, that they have borne melted wax to be dropped upon them without the least agitation of countenance, yet the whole has proved a deception.

But the most extraordinary instance of the extent of the power of the mind over the vital functions, is related by the celebrated Dr. Cheyne, in his *Treatise on Nervous Diseases*. It is the case of an English officer, a Colonel Townshend, who could stop the motion of his heart and arteries at pleasure; he could die or expire when he pleased, and again revive. The story is too long to be told; but it is well authenticated: those who cannot procure Dr. Cheyne's work, may read it in Dr. Elliotson's translation of Blumenbach's *Elements of Physiology*, in which it is quoted at length.

It is not easy to determine the object of

these deceptions in many instances. I might mention several cases recorded by authors, in which no motive could be traced; but I will notice one only, which came under my own care. A young lady, only 16 years of age, who was in good health, affected to be suddenly attacked with excruciating pains about the region of the bladder. Large doses of opium and other means were prescribed to relieve her, but with apparently temporary benefit only: the pains appearing to return with unabated violence three or four times a-week. At one time the urine was retained for twenty-four hours, until the bladder was prodigiously distended, and she submitted to have it drawn off by a catheter. These symptoms continued, with little variation, for nearly ten months, during which time she had been seen, in consultation with me, by three of the most eminent physicians in London. During this period, my suspicions were several times raised, but they were almost as quickly suppressed, by reflecting on the respectability of the patient, and the absence of any motive for deception. At length I was sent for, late at night, and was seriously informed that my patient had discovered the cause of all her sufferings, and would now get well; for she had that night passed two stones from the bladder of urine. These stones, however, which were put into my hand, were never formed in the human body, but were small pebble stones, picked up from a gravel walk. She had no return of the pains, and was soon afterwards married. No motive could be assigned for this continued system of deception, except the desire of exciting commiseration, and being made the subject of conversation. When she ceased the practice, another and more exciting feeling, *love*, had taken possession of her mind; she became indifferent about *pity*: but it was necessary to terminate the apparent suffering under which she had so long laboured, by something which, in her opinion, would fully explain her hitherto inexplicable disease. She adopted the means which I have mentioned, and, whilst making water, dropped the stones into the chamber-pot, in the presence of her mother, who was as much the dupe of her deceit as the physicians had previously been. There is great difficulty in detecting frauds of this description; for, although a practitioner of observation remarks the distinction between the symptoms presented to him and those of real disease, yet, not suspecting fraud, he endeavours to account for the anomalous appearances; and, although still puzzled, he continues to treat them as cases of actual disease. If the medicines which he prescribes are taken by the patient, he traces their usual operation upon the body, but is disappointed in his hope of their relieving or removing the symptoms by the medicines to which they have generally yielded when no particular idiosyncrasy has existed to op-

pose their operation. The profession is brought into disrepute by the apparently repeated failures; and the practitioner, if a young man, is not only deeply injured in character, but he begins to lose his confidence in medicine, and, consequently, to abate his ardour for inquiry, and to relax his attention in observing the influence of remedies, and gradually sinks into the state of a mere routine prescriber. But a more serious evil springs from these deceptions, when the object of the individual practising them being attained, the patients appear to owe their recovery to certain plans of treatment which are of a novel character, or to the employment of a new remedy. In these instances, the plan of treatment or the new remedy is published to the world, and others are misled by the representations, to perhaps the irreparable injury of unfortunate patients. I will illustrate this remark by a case which came under my own care, and was published eight years since, in a work which has been extensively read, besides being noticed in several journals.

The patient was a young lady, under fifteen years of age, of a sanguine temperament and quick parts, but not fond of study, and impatient under restraint of any kind. She stated, that a year before the time at which I saw her, she suffered under an attack of tic douloureux, for which Dr. Baillie attended her. It was less severe than her present attack, but sufficient to oblige her to be removed from school. She described the pain, the seat of which was about an inch backward from the symphysis of the lower jaw, and apparently in the course of the branch of the ninth pair of nerves which supplies the genio-hyoideus muscle. She described the throat as being also partially affected, and stated that deglutition was somewhat impeded, as well as speech disturbed. The screams of the patient, when the paroxysm returned, and the writhings indicative of the torture caused by the pain, were most heart-rending to those who witnessed them.

Finding that every remedy with which I was acquainted had previously failed in the hands of Dr. Baillie, I resolved to try the effect of a powerful mental impression; and, with this in view, I made inquiry of the lady under whose charge the patient was at school, whether she knew of any strong antipathies of her pupil. She stated that she had an unconquerable dislike to a dog who was in the house; and, having obtained this information, I proceeded to the room of the patient, and informed her, with as much gravity of countenance as I could command, that the only other remedy which I had in store for her disease, all others having failed, was to have the affected part rubbed with the back of the dog, and that I meant instantly to have it applied. Whilst I was stating my intention, she became as pallid as a corpse, large drops of sweat formed on her

forehead, and she appeared passing into the most alarming syncope. From that moment no other attack of tic occurred until eighteen months afterwards, when the disease recurred in the same apparent degree and manner as before; but it was immediately arrested by suddenly taking the patient out of bed, and hurrying her into a shower bath. Now, at the time when the cure in both instances was published, it was attributed to the powerful impression made upon the nervous system through the mind; but, to shew the fallacy into which a physician may be led in reasoning upon the apparent effects of medicines, I have only to mention, that, eight years afterwards, I received a letter from the patient, who was at this time married, and the mother of two children, acknowledging that the whole of the attacks under which she was supposed to labour, when at school, were feigned, with no other view than to get from school*.

Internal diseases are simulated in two ways:—1. a temporary diseased state of the body may be produced by substances of various kinds taken into the stomach, or applied to the surface of the body: 2. appearances very similar to the symptoms of diseases may be altogether the effect of imitation. Both modes are not unfrequent; but the first method is chiefly practised by soldiers and sailors.

Fevers are simulated by swallowing a mixture of soap and tobacco, which produces a small rapid pulse closely resembling that of continued fever, with a brown fur on the tongue. The same state, Foderé says, can be produced by smoking cummin seeds; and Dr. Paris informs us, that a paroxysm of fever may be excited and kept up by the introduction of a clove of garlic into the rectum. But these deceptions are readily detected by confining the person to bed, and closely watching him; the symptoms, instead of increasing, as in real fever, entirely disappear in a few hours. It is not more difficult to detect the simulation of ague by old soldiers, who, Dr. Hennen informs us, are deeply versed in the history of a paroxysm of intermittent, and very skilful in imitating the rigors, and giving the febrile aspect of the tongue, by whitening it with chalk. The absence of the hot and sweating stages of the paroxysm readily discover these imitations.

Epilepsy being a disease which recurs only at intervals, and which can be readily assumed at the moment most convenient for the object of an impostor, has been more frequently and successfully simulated than most other general diseases. To give the appearance of bloody froth, which frequently issues from the mouth in real epileptic fits, in which the tongue is often wounded, blood is sucked from the gums and soap chewed,

* The lecturer here read the letter—merely withholding the name of the lady,

The best means of detecting this imposition is to wait until the sleep, which is the usual termination of the paroxysm, be imitated, and then either to drop hot sealing wax, or to apply a red hot iron to the leg of the impostor; the true epileptic is insensible to pain at this time; but it is rarely that the impostor does not display sensation on being thus tried. It is of no use to apply such means during the pretended convulsions, as during the compression of the nervous filaments, by the voluntary violent contractions of the muscles, sensibility is so much reduced that pins and needles may be run into the body, and the most irritating applications made to it, without the individuals betraying the least consciousness. A more satisfactory method of detecting the deceit is to ascertain the contractility of the pupil, which does not take place in real epilepsy, and also to observe whether the face become livid. Another method is the application of sternutatories to the nostrils, which have no influence in real epilepsy, but produce sneezing in the feigned disease. De Haen relates the case of a girl who was brought to the hospital at Vienna with epilepsy, which, from occurring once or twice a day, now occurred every hour. The resemblance was good in every respect but one; during the paroxysm she did not open her eyes with a winking, but in the natural way, which, along with the natural state of the pulse, and the contractility of the pupil to light, led De Haen to suspect some deceit. He ordered her to be taken out of bed, and directed the attendants, in her hearing, to place her erect, and, if she fell, to chastise her severely. She took care not to fall, and by this display of volition the fraud was detected. An excellent method of detecting the feigned disease in a beggar was practised at Paris. This man had excited so much compassion, that a bed of straw was prepared, on which he might fall without injury to himself: at length, the fraud being suspected, the four corners of the bed of straw were set on fire, whilst he lay on it in a paroxysm of the disease. He quickly sprang up, and fled.

Dr. Beck justly remarks, that "one fact should be kept in view respecting this disease. The real epileptic is desirous of concealing his situation, and attaches to it a kind of false shame, while those who feign the disease talk about it, and take no precaution to avoid publicity.

Catalepsy is a disease of very rare occurrence, but is, nevertheless, occasionally feigned. The real disease consists in an instantaneous rigidity of the trunk and limbs, the suspension of the senses, and temporary interruption of the exercise of the intellectual faculties. The posture and expression of countenance at the moment of seizure is retained by the patient, and from its not varying, and the fixed attitude of the body, the person appears actually like a

statue. The pupil contracts on the approach of light, but the eyelids continue fixed, and the balance of power between the flexor and extensor muscles is so equal, that any new position in which the limbs or trunk of the body is placed by force, is maintained. The return to the natural state is as instantaneous as the attack of the disease. It is generally the result of sudden and powerful shocks to the nervous system; and the symptoms are so singular that Dr. Cullen and several other medical writers have considered it as in every instance a feigned disease. I have seen two cases of it, in one of which no doubt could be entertained of the reality of the disease; and, in the other, no motive existed for deception. I will describe to you the most interesting and undoubted of these cases. I was attending, nearly twenty years ago, an officer in the army, who was labouring under phthisis, in the last stage of the disease. His hope of recovery was still, however, kept alive in his mind and that of his wife, so that his friends could not persuade him either to make his will or to sell his commission, which was all that he had to bequeath to his wife and an only daughter. At length he became sensible of his danger, and drew up a petition to the commander in chief, for leave to sell out; and at the same time he made his will. I was sent for to witness his signature to both. Having executed these deeds, his mind seemed much relieved, and I left him more happy than he had been for many months. I had not, however, left the house five minutes before the servant ran breathless after me, and required my immediate presence, as her master was much worse. I returned instantly, but my patient was dead: he had fallen back on the bed immediately I left the house, and expired without a groan. His poor wife was standing by the side of the bed like a statue; pale, her eye fixed, as it were, on vacancy, and insensible evidently to my entrance into the room. Finding that her poor husband was past all human aid, I approached Mrs. —; she seemed to take no notice of anything; I took her hand—she felt it not; I spoke to her—my voice was unheard; no pulse was perceptible at the wrist; and it was only by the dew on a mirror approached to her mouth that I was satisfied that she breathed. It instantly occurred to me that it was an attack of catalepsy; and I was confirmed in my opinion by finding that the arms and other parts of the body remained fixed in any position in which they were placed. She was put to bed, and continued in this state for forty-two hours; after which she suddenly seemed, as it were, to awake, was sick, and re-action soon came out, and augmented to fever. She was two months ill, and in a most precarious condition.

This case is a parallel to one described by the late Dr. Good, which I will take the liberty of reading to you. (The lecturer

read the passage from Good's Study of Med. vol. iii, p. 578.) I will also notice another remarkable case quoted by Sir Alex. Crichton from the fifth vol. of the Psychological Mag., and quoted in his work on Insanity. (The case was read.) These statements are sufficient to convince you, I hope, that catalepsy is a real disease; and, from its nature, it might be thought one unlikely to be imitated; but this has been attempted several times, with variable success. Dr. Hennen mentions an instance of it in a soldier, in the royal African corps, of the name of Drake, who assumed an appearance of total insensibility, and resisted every kind of severe treatment for some months, even the shower bath and electricity; but on a proposal being uttered in his hearing, to apply a red hot iron, his pulse rose; and when preparations were made, and the hot iron was approached to his body, he displayed sufficient signs of sensibility: on proposing to send him to Bethlem hospital, he gradually recovered. Another case is recorded of a young soldier, who resisted measures of still greater severity; he permitted pins to be thrust under his nails; his head to be trephined; and several other cruel acts committed; yet persisted in the deception until he procured his discharge; immediately after which he was seen in perfect health, employed actively in his father's house. The following curious method of detection was employed by John Hunter:—The patient was a young man, a patient of St. George's Hospital; he apparently lost every power of volition and consciousness, and remained in the attitude in which he was placed. John Hunter commented on the case to the students surrounding him, whilst the man stood near, with his arm extended and a little elevated—"You see, Gentlemen," said Mr. Hunter, "that the

hand is supported merely in consequence of the muscles persevering in that action to which volition had excited them prior to the cataleptic seizure. I wonder," continued he, "what additional weight they would support;" and, so saying, he slipped the noose of a cord round the wrist, and hung to the other end a small weight, which produced no alteration in the position of the hand. Then, after a short time, with a pair of scissors, he imperceptibly snipped the cord; the weight fell to the ground, and the hand was as suddenly raised in the air, by the increased effort which volition had excited for the support of the increased weight, and at once unveiling the imposture, as the possession of both consciousness and volition was thus demonstrated. It might be supposed that such deceptions as this would readily be recognized by the state of the pulse; but the power of the will over even the function of the heart, which some persons possess, is truly wonderful. In proof of this, it is merely necessary to refer to the case of Colonel Townsend, related by Dr. Cheyne on Nervous Diseases, p. 307*.

This extraordinary case may be regarded as an example of the power which may be exerted, of feigning *syncope*; and another similar instance used to be noticed by D. Cleghorn, of Glasgow, in his lectures; in which the individual had so completely the power of arresting the action of the heart, that he could render the pulse imperceptible at the wrist, whenever he pleased; and thus feigned death without any difficulty.

At our next meeting I shall conclude this subject.

* See Elliotson's Blumenbach, p. 266.

LECTURES ON THE INSTITUTIONS OF MEDICINE,

DELIVERED BY JOHN FLETCHER, M.D., F.R.C.S.E., AT THE ARGYLE SQUARE SCHOOL OF
MEDICINE, EDINBURGH; SESSION 1834-35.

LECTURE XI.

Applications of Organic Chemistry to Physiology.

In the remarks which have preceded, it has been throughout presumed that, however distinct may be the chemical nature of the several Organized Tissues, and that of the Unorganized Tissues and Fluids, all the vegetable and animal compounds, above enumerated as proximate principles, are the results of the associations of certain elements effected by secretion, as a process, although not identical with, still analogous to common chemical affinity; but it would be improper to dismiss the subject without remarking that it is by no means certain, on the one hand, that these alleged elements are really so, or, on the other, that secretion is not a process essentially different from common chemical affinity, as well in the *material* as in the manner of its operation. The avenues by which all the oxygen and hydrogen, which these compounds contain, enter the organized system are

supposed to be sufficiently obvious; but, with respect to the carbon, it has been proved by ample experiments that plants and animals in general excrete constantly from their respiratory organs alone—to say nothing of its consumption in other ways—much more of this principle than has any evident ingress into the system (*a*); and the source of such an abundance of nitrogen as many plants and all animals, herbivorous as well as carnivorous, contain, is a subject involved in much obscurity. It is known to be abundantly evolved from some of the Fungi and Cruciferae, as the mushroom and mustard, when nourished by apparently perfectly pure water (*b*); it exists in zoophytes, which remain permanently attached to rocks at the bottom of the sea; and it has been found that fishes (*c*), which, of all animals, most abound in this principle, and in the air-bladders of some of which it is found almost pure, as well as some reptiles (*d*) live and grow though kept for years in water alone. Again, plants which grow in sand, or upon granite, are found to contain as much lime—the chief element of which is calcium—as those which grow in a calcarous soil (*e*); the bones of the native animals of some districts of New South Wales, in which not a particle of lime, it is said, is to be detected in either the soil or the vegetable productions, contain this substance, in the state of phosphate of lime, in the usual quantities; and the same has been found excreted, in the state of carbonate, with the egg-shells of hens, in quantities for which the food taken is quite inadequate to account (*f*): the enormous masses also of carbonate of lime sometimes laid down in the form of coral-rocks, &c., by minute animals, without any manifest supply of its ingredients, are sufficiently well known. Similar to these anomalies is that of the abundant excretion of sodium, in the form of carbonate of soda, by plants—the *Salsola Soda*, for example—when growing in a soil which does not contain an atom of it (*g*); as well as that of the occasional presence, it is said, of copper in some shell-fish, and of gold in the bezoards, or intestinal concretions of certain herbivorous quadrupeds, the sources of both which are equally obscure. It is true that attempts have been made to explain, on ordinary principles, the evolution by plants of the great quantity of carbon above alluded to (*h*), as well as that of the nitrogen (*i*), of the calcium (*k*), and of the sodium (*l*); and similar attempts have been made to account for the appearance of some of those elements in animal compounds, the source of which is equally ambiguous—in particular of the nitrogen, which has been confidently traced, as well in herbivorous as in carnivorous animals, to the food on which they subsist (*m*). Of most of these attempts, however, it is sufficient to say that they are by no means satisfactory; and that the source of many of the presumed elements in the reputed proximate principles of both plants and animals is still very problematical.

May we not then hazard a conjecture that these presumed elements, or at least many of them, are not really elementary, but composed of ulterior atoms, for which we have no names, but which, united together in various proportions, constitute the substances in question? We call the latter elements only because we are incapable of either decomposing or composing them in a common chemical laboratory (*n*); but it is not certain that

(*a*) That plants evolve, in this way, more carbon than can be satisfactorily accounted for, was proved long ago by Dr. Crell; and, with respect to animals, of the forty-three ounces of carbonic acid lately mentioned as voided day by day from the lungs of man, nearly twelve ounces are pure carbon, the only obvious source of which is the aliment. Now, admitting that of the hundred ounces of aliment received in this period, at least ninety are nothing but oxygen and hydrogen in the form of water—which constitutes so large a proportion, as well of our solid as of our liquid food—ten ounces only are left to furnish, with much more oxygen and hydrogen, all the carbon and nitrogen of the system.

(*b*) Wallerius, &c.

(*c*) Rondelet, *Opera Omnia*, 1628.

(*d*) Redi, *Experimenta*, &c., 1685; Mead, &c.

(*e*) Decandolle and Sprengel, *Philosophy of Plants*, 1821.

(*f*) Vauquelin, *Ann. de Chim.* 1798,

(*g*) Schrader, Braconnot, &c.,

(*h*) Saussure, Goëppert, &c.,

(*i*) Kirwan, &c.

(*k*) Bergmann, &c.

(*l*) Saussure, Davy, &c.

(*m*) This conclusion has been drawn by Magendie, who found that animals soon died when fed exclusively on pure gum, sugar, oil, or any other substance quite destitute of nitrogen, with distilled water. The result, however, of the unfortunate experiments made many years ago upon himself, by Stark, of Vienna, sufficiently displays the inadequacy of any kind of aliment, if too long persevered in, to support the vital powers; and it has been well shewn by Dr. Paris that highly concentrated aliment is very ill adapted to this end, as not affording a sufficient stimulus to the digestive organs, and that it was not for lack of nitrogen, but for lack of food—abundant and, abstractedly considered, nutritious as their food was—that the subjects of the experiments of Magendie perished. The most highly azotized aliment, under the same circumstances of want of change and excessive concentration, would have had precisely the same effect.

(*n*) "The number of substances admitted as elementary," says Sir Charles Morgan, "is liable to perpetual variations; for, the

the powers brought into operation in the laboratory of the organized body—the powers of secretion—cannot first decompose, say oxygen or hydrogen, into certain ulterior atoms, and afterwards re-combine some of the latter into carbon, or nitrogen, or other reputedly elementary substances, the source of which has just been represented as so mysterious. However this may be, we seem at least justified in concluding, not only that the immediate chemical nature of organized matter is very different from that of such as is unorganized: but also that its alleged elements are somewhat questionable, that the process of secretion—by which the ultimate ingredients of all vegetable and animal compounds, whatever they may be, are associated together—is an infinitely more subtle and searching power than that of common chemical affinity, and that there exists between the two, perhaps only a very faint and remote analogy.

Taking then all these circumstances into consideration, we need be at no loss to account for the very little advancement which either physiology, pathology, or therapeutics, have hitherto derived from the study of organic chemistry—an advancement certainly very disproportionate to the expectations which were at one time entertained of it, and to the ardour with which it has been so long prosecuted (*a*). We indeed tacitly acknowledge that the composition of an organized being, whether in health or in disease, is out of the pale of common chemical doctrines, by in general, instinctively, as it were, abandoning such doctrines, whenever we come to speak of the proper business of these sciences. Is there any thing, for example, in the history of the properties of osmazom, of sodo-albumen, of gelatin, or of fibrin—pompously and circumstantially as these are sometimes set forth, under a vague impression of their importance—which assists us one jot in explaining any one of the physiological properties of a membrane, a nerve, or a muscle? Is it from any change in their reputed proximate principles that membranes contract adhesions, nerves become softened, and muscles indurated? or do we seek to remove the first by dissolving their sodo-albumen or gelatin, to harden the second by coagulating their osmazom or sodo-albumen, or to soften the last by acting in any way on their osmazom, sodo-albumen, gelatin, or fibrin? The idea is palpably absurd. We *feel* that organized tissues, whether sound or diseased, are not amenable to common chemical laws, nor within the reach of common chemical agents, as having, in fact, none of these so called proximate principles in their composition; nor has the application of organic chemistry to the unorganized tissues and fluids, as connected with certain conditions of the organized parts, been hitherto so happy, as at all to invalidate the conclusion above adopted. We know indeed that the chemical character of the mucilage, for example, of the bile, of the stools, of the urine, and of several other secreted fluids, is variously affected in numerous diseases, and we have established about four distinct kinds of biliary concretions, double that number of intestinal, and almost double that number again of urinary; but what real light, it may be asked, has the knowledge of these facts thrown either on the processes by which such matters are produced, or on the means by which such processes may be counteracted or subverted? On the other hand, most of the hypotheses—when such have been broached—whether physiological, pathological, or therapeutical, which rest on a chemical foundation, involving either the supposed proximate, or the supposed ultimate principles of the body, have been eminently unfortunate. Witness the hypothesis lately alluded to, that the contractions of muscles depend on the coagulation of their supposed fibrin; and that, still more absurd, which assumes that these contractions are effected directly by the motions of the fibrin of muscles already coagulated, and represents accordingly the crassamentum of the blood as susceptible of the same, on the application of a stimulus (*b*). How vaguely, again, has diabetes been ascribed to the presence of ready-made sugar in the blood (*c*), and scrofula, or a tendency to deposit tubercular matter in various parts of the body, to a superabundance in it of sodo-albumen (*d*), and abstinence, therefore, from the white of eggs, in this disease, gravely inculcated (*e*). How idly has

epithet referring to one's own powers of operation, and not to qualities inherent in the subject, it becomes applicable or otherwise, as the species in question is affected by the progress of chemical research. The term element must not therefore be taken as conveying a positive assertion respecting the intimate nature of the body to which it applies. It does not signify undecomposable, but undecomposed."—(On the Philosophy of Life, 1818, p. 29.)

(*a*) It was long ago perceived by Sprengel that organic chemistry could never afford any principles of physiology; and it was

sagaciously remarked by one of our best medical journalists, soon after it began to be fashionable to apply this study to physiology and pathology, "We are not even certain that we are in the right path, and that we shall not be obliged to retrace our steps." *Edinburgh Medical and Surgical Journal*, 1816. How prophetic was this observation!

(*b*) Tourdes and Circaud, contradicted by Heidmann, *Reil's Archiv*. VI., S. 417, &c.

(*c*) Dobson and Rollo, contradicted by Wollaston, Marcet, Thenard, and Vauquelin.

(*d*) Dr. Parr, *Medical Dictionary*, 1809.

(*e*) M. Ségalas goes even further than th

it been attempted to establish a connection between the liability to croup, with the consequent formation of a morbid membrane in the trachea, and the quantity of fibrin in the blood (a)—and seriously recommended to try to obviate this effect by copious dilution (b)—nay, how incorrectly do we almost constantly speak of the rudiments of any new growth, as merely coagulable lymph, or fibrin, *effused* by the arteries, and organized, as it were, mechanically (c), instead of a proper germ or matter, *secreted* by these vessels, and containing within itself the rudiments of its own organism. All this, however, is quite of a piece with the conceit so long entertained, and still by some persons so fondly clung to, that numerous diseases, such as scrofula (d), urinary calculi of uric acid (e), gout (f), and rickets (g), have their origin in too acid a state of the blood; while others, on the contrary, as diabetes (h), urinary calculi of the phosphates (i), exostoses (k), and sea-scurvy (l), arise from too alkaline a state of this fluid; and hence the alleged reason that acid substances are injurious, and alkaline beneficial, in the former diseases, while the reverse is the case in the latter. Again, either an alkaline or some other morbid condition of the blood, has been presumed to prevail also in most of the diseases of the skin (m), and in all the so-called putrid diseases (n), and to be the cause of all the peculiarities which they severally display. Nor is it only with respect to the supposed proximate principles of the blood—which has been thus ingeniously inferred to be saccharine, or too albuminous or fibrinous, when the secreting vessels have formed from it *de novo* compounds, which are found to contain these matters, or too acid or alkaline, when these vessels have deposited in the same manner a calculus, or a gouty concretion unfortunately containing an acid, or

and condemns cow's milk in scrophula, not only because it contains albumen, but because cows, as shown by M. Huzard, are very liable to tubercular accretions! By what process, or series of processes, these are to pass *en masse* out of the body of the cow with her milk, and again into the body of the drinker thereof, does not immediately appear: but, granting that the secreting vessels are thus easily influenced with respect to the nature of the organized matters which they deposit, we need be at no loss, at any time, for a new pleura or peritoneum, a new nervous system, or a new set of muscles, as occasion may require, since, without trying to manufacture them in a laboratory, as some persons have presumed that we shall in no long time be competent to do, they may easily be got by feeding on isinglass or carpenter's glue, on the white of eggs, or on the clot of the blood of bulls or of goats. M. Bonhomme's suggestion of taking crude phosphate of lime in rickets, for the purpose of setting new bones, was a mere bagatelle to what may be done in this way.

(a) Dr. Mason Good, Study of Medicine, 1822, the early fellow-labourer of Dr. Parr, has the credit of having first directed "the prying eye of philosophy" into this promising field.

(b) Piorry.

(c) See Home and Bauer's ingenious suggestions respecting the squirting out of carbonic acid from the reputed fibrin, at the instant of its supposed coagulation, leaving channels into which the blood from the contiguous parts was squirted in, and thus the organization was effected. Phil Trans. 1818 and 1820.

(d) This doctrine is as old as the times of Arabian physicians, who were the first to substitute a supposed vitiation of the humours as the cause of diseases in general for the supposed loss of balance in their distribution, as maintained by the first humoral

pathologists.

(e) Wollaston, Magendie, &c.

(f) Mazuyer, &c. The "specificité" *à toto* of gout has been denied by the Broussaists, and lately by Dr. Leese; but we may admit the "specificité" of the inflammation without attributing it to the cause above alluded to.

(g) The notion that rickets arose from this cause originated in an absurd hypothesis invented by the chemists, to explain ossification, which they chose to represent as quite analogous to petrification, or the deposition of tufa, the matter being first deposited by a fluid in the state of a soluble super-salt, and afterwards reduced to that of an insoluble neutral salt by the removal of its superfluous acid. This, in the former case, was of course to be effected by the absorbent vessels; but these, if already overcharged with acid, refused to do so, and hence the earth of bones was left in a soluble state. The blood in rickets was accordingly found by M. Vienac to effervesce in a wonderful manner with the carbonates of alkalies!

(h) That diabetes depends on too little phosphoric acid in the blood is the conclusion to which Dr. Latham arrived after several years spent, as he expresses it, "in weaving hypotheses" to explain this disease; his success is certainly as remarkable as his assiduity was exemplary.

(i & k) These two diseases are directly opposed to rickets upon the principles above stated; while their immediate cause is the same as that of diabetes, as might indeed have been anticipated from the great similarity of the symptoms.

(l) This idea respecting sea-scurvy has been prevalent from the earliest writers on the disease down to the time of Cullen. It has been shown to be false by Deyeux and Parmentier, by Lind and by Parry.

(m & n) Lorty, Cullen, Mason, Good, &c.

matters of which the ingredients either are, or are supposed to be, too alkaline—that such doctrines have been adventured; but a loss of balance in the presumed elements of the organized body has been frequently, and in general equally unhappily, put in requisition to explain various diseases: and, in the first place, in whatever way these elements may be conceived to enter the animal body, it has been very generally inculcated that to the subsequent expulsion of each, except the oxygen, which goes off indiscriminately by every avenue, a specific organ is appropriated, the hydrogen, for example, escaping with the bile from the liver, the carbon with the carbonic acid from the lungs, the nitrogen with urine from the kidneys, and so forth (*a*); consequently, when any one of these organs performs less or more than its assigned part—to say nothing of the probability that more or less of these principles may at the same time be taken in—there must arise either an abundance or a deficiency of some one of them, and from each in either case its own train of diseases. Moreover, males, it is said, under ordinary circumstances, always abound more in oxygen, and females in hydrogen, so that the embryo derives almost the whole of the former principle from its father, and almost the whole of the latter from its mother (*b*); but from each of them thus in excess in the respective sexes certain liabilities to disease will of course arise. Thus, a superfluity of oxygen has been confidently represented as giving rise to phthisis, as a deficiency of it has to sea-scurvy (*c*); and it is on these grounds that the inhalation of hydrogenous gases in the former, and the employment of acids and ascescent fruits and salads, as containing oxygen, in the latter have been supposed to be beneficial. On the other hand, an excess of hydrogen produced by dram-drinking has been supposed to give rise to catacansis or spontaneous combustion (*d*); and an excess of carbon, occasioned by the undue admixture of venous with arterial blood, to give rise to all the bad symptoms of cyania or morbus cæruleus—whether, on the one hand, any diseases arise from a deficiency of either of these principles is uncertain.

Again, it has been imagined that it is from a superabundance of nitrogen that urinary calculi of uric acid and gout take their rise—the uric acid unfortunately containing nitrogen as one of its ingredients—and it is on this account it is supposed that, besides the use of alcalies, vegetable food agrees but with persons troubled with these diseases; whereas it is from too little nitrogen, on the contrary, that diabetes has been conceived to arise (*e*), and hence the advantage experienced from exclusively animal food in this disorder. But it is not only these chief elements which either in excess or deficiency may be, it has been supposed, at the bottom of so many diseases, but others of less importance, as sulphur, arsenic, &c., when superabundant, may act in a similar way, and such has been imagined to be the cause of cancer (*f*) and certain other affections, and the application of chemical hypothesis to therapeutics has been equally woful. What shall we say to the doctrine which teaches that it is by a kind of tanning of the several tissues that astringent medicines take effect in the several diseases in which they are used? What to that which inculcates that it is by combining with the oil of a Bronchocele, and thus converting it into a soluble soap, that soda is of service in this disease; or to that which would persuade us that it is by its affinity for the ammoniacal salts of the blood (*g*), or by its forming with the hydrochloric acid of the saliva a soluble hydrochlorate—whereas with the urine it could only have formed an insoluble phosphate (*h*)—that mercury acts as a sialagogue? What shall we say to the presumption that yeast is of service to the reputedly putrid diseases, upon the same principle as carbonic acid prevents meat from putrifying (*i*); or to that which assumes that hydrochloric acid is beneficial in the same diseases, because contagious miasms are thereby rendered inert (*j*)? What again to that which attributes the advantage of cold affusion in fevers to the decomposition of the water, and the entrance of its oxygen into the system (*k*)? But it is superfluous dwelling any longer on such wretched mummery as this. If doctrines like these were applicable at all—that is to

(*a*) Fourcroy.

(*b*) This is the hypothesis of Ackermann, differing from that of Galen, lately renewed by Rolando, with respect to the communication to the embryo of certain tissues from each parent, only in being much less tenable. We smile in our wise moments at the reveries of our predecessors; but how often do we, in our foolish moments, imitate, or even surpass, them!

(*c*) Beddoes. On the other hand, M. Baudelocque has lately, with equal probability, represented scrofula, of which phthisis is merely a node—as arising from too little oxygen, or, at any rate, as depending on too rare a renewal of the air.

(*d*) Le Cat, Marc, Kopp, &c. It is perhaps on this account that drunken old women, who may be presumed to be excessively hydrogenous in their composition, are the chief victims of this disaster!

(*e*) Rollo.

(*f*) Peyrilhe, Ewart, &c.

(*g*) Cullen, Lect. on Mat. Med. 1773.

(*h*) Murray, Materia Medica, 1828.

(*i*) Cartwright.

(*j*) Guyton-Morveau.

(*k*) Mason Good. It is fair to observe, however, that the learned writer only “throws out this hypothesis as a hint, to be prosecuted by”—those who have nothing better to do.

say, if the living body were to be regarded at any time as a merely chemical machine—they must obviously be so much more frequently than has ever been presumed; since the proportion of the principles of the blood, proximate or ultimate, if liable to be ever disturbed in the way that has been supposed, could hardly, under every slight variation of circumstances, escape disturbance, and such disturbance, if it produced the few diseases which have been stated, must have produced innumerable others; and since the operation of medicines, if even determined by chemical affinities, must have been always more or less under their influence. But the human body is regarded as a merely chemical machine only as often as it is convenient so to consider it—and while in discussing some few diseases and remedies chemical doctrines are all in all, in speaking of the great majority of both, it seems to be forgotten that there are such things as sodo-albumen or fibrin, acids or alkalies, oxygen or hydrogen in existence. Such partial hypotheses are *prima facie* suspicious; and, were this the place for discussing the subject, all which have been just alluded to might easily be shown to be individually, as well as collectively, erroneous. At present, however, it is sufficient to observe, in conclusion, that, as formerly a false estimate was made of the scope of mathematical science, in applying it to explain the *actions* of organized beings, so in recent times a similarly false estimate seems to have been made of that of chemistry, in applying it to explain either its actions or its *composition*; and that the doctrine of angles and logarithms and algebraical equations is not in general more foreign from the one, than that of definite proportions and solubilities and chemical re-agents is from the other.

The more or less rapid spontaneous decomposition of organic matters, if ternary or quaternary, when deprived of their irritability or vitality, arises from the complexity of their combination being such as rarely to allow of the affinities of any of their elements being fully satisfied. The oxygen in them, for example, is not in sufficient quantity to saturate their hydrogen and carbon—therefore they are all inflammable; and the constant tendency of all their elements to run into binary, instead of ternary or quaternary compounds, is such as to effect, under favourable circumstances, their speedy separation. The most remarkable kind of spontaneous decomposition of quaternary organic compounds is putrefaction. In this case if the substance which is about to undergo it, whether vegetable, as extractive or animal, as sodo-albumen or gelatin, be exposed to the atmosphere, it first acquires from it more oxygen, and thus are formed, with a portion of the hydrogen and carbon, water and carbonic acid. In the mean time other portions of each of the latter, uniting together, form carburetted hydrogen; while the remainder of the hydrogen, uniting with the nitrogen, forms ammonia—the distinctive product of this kind of decomposition. This process is favoured by any means which either diminishes the cohesion of the particles of the substance, or exerts an affinity for any one of the resulting binary compounds, the free access of the atmosphere being of course essential to it; and it is accordingly in the former of these ways that a moderate temperature—such as that between 60 and 80 deg. and a moderate supply of moisture, promoted of course by the contact of deliquescent salts, seem to operate; while it is in the latter way that lime and other matters generally called septic, which predispose to the formation of carbonic acid, &c. appear to act (a). On the other hand, the process is retarded by any means which either increases the cohesion of the particles of the substance, exerts an affinity for the quaternary compound as it is, or excludes the air; and it is accordingly upon the first of these principles that either great heat or great cold seems to operate, the former by drying up and the latter by congealing the moisture (b); it is partly upon the first and partly of the second principle that numerous matters, commonly called antiseptic, such as alum, nitre, sea salt, and corrosive sublimate, appear to act; while it is upon the third principle chiefly that keeping the substance in full and well-stopped bottles, or, as lately observed in carbonic acid or other gases, or smoking it, or imbuing it with wax, honey, sugar, gum, resin, balsam, pitch, oil, paint, varnish, oil of turpentine, alcohol, vinegar, and so forth, seems to produce the effect in question (c).

(a) Hence the common practice of putting lime into the coffins of persons who have died of really or reputedly contagious diseases—a practice somewhat superfluous, perhaps, since such diseases pretty certainly cease to be contagious long before decomposition, however accelerated, can take place.

(b) It is sufficiently well known that dead bodies, left either on burning deserts or in the glaciers of Alpine districts, do not undergo this change.

(c) It is remarkable how soon the prac-

tice of embalming, which originated in a belief in the celebrated doctrine of the *metempsychosis*, led to a knowledge of the influence of all these solid and liquid substances in preventing the decomposition of the dead, with the exception of corrosive sublimate, oil of turpentine and alcohol, with which mankind was not acquainted till the age of the Arabian physicians, who introduced, for the first time, the art of sublimation and distillation. The word mummy is derived from the Egyptian *mum*, or wax, as embalming is from the *balm* employed in

If, again, a substance susceptible of putrefaction be kept in water, it undergoes these changes more slowly; and, provided there be present at the same time any acidifiable matters, such as stearin or elain, the results are different from those first stated. In this case the water, if not retained undecomposed by a mixture with it of alcohol, or any other substance having a strong affinity for it, first affords the requisite oxygen, and the same, or nearly the same, results as in the former case, are produced. But now the ammonia, instead of being dissipated, seems to remain in contact with the substance, and to predispose the acidifiable matters to absorb oxygen and to become acid, which acid, subsequently uniting with the ammonia, give rise to a kind of salt, or soap, called adipocere (a). It was till lately believed that none but the fibrinous parts of animals, when interspersed with fat, were capable, under favourable circumstances, of undergoing this change; but it has been recently established that the albuminous and gelatinous parts are equally liable to it (b). Lastly, quaternary organic compounds when below ground, undergo changes, according as the soil is either dry or moist, similar to those which they undergo in either air or water, but generally speaking, more slowly than in either, particularly if they have been well enclosed and buried deep—if, however, such changes have begun to take place previously to burial, it is important to know that they are not retarded by this measure. The decomposition of interred human bodies has been said to be, under ordinary circumstances, perfect at the expiration of about three years, if the grave be four feet deep; and of about four years if it be six (c). Upon what principle it is to be explained that such spontaneous decomposition of the animal body does not always take place, even when no extraordinary means have been employed to prevent it, or certainly not within the usual period, is quite unknown; such, however, is said to have been the case in not a few very remarkable instances (d), but the authenticity of the majority of these is somewhat questionable.

**LECTURES
ON THE
PHYSICAL EDUCATION AND DIS-
EASES OF INFANTS,
FROM BIRTH TO PUBERTY,**

By DR. RYAN,
*Delivered at the Medical School, Westminster
Dispensary, Gerrard Street, Soho;
Session 1834-35.*

LECTURE XXVIII.

*Acute, Congenital and Chronic Hydrocephalus
—Stages — Pathology and Treatment—Pa-*

*racentesis Cranii (tapping the brain) — Cases
in which the Operation is justifiable — Cases
in which it is unjustifiable — Remarks on the
various Remedies employed in Hydrocephalus.*

GENTLEMEN—I have now to direct your attention to the pathology and treatment of the varieties of effusion in the brain, or the disease called hydrocephalus. This is a subject of intense interest, and one that requires the recollection of the anatomy, physiology, and pathology, of an organ which is one of the most important in the animal economy..

the process. The ancient Jews, Greeks, and Romans commonly burnt their dead; but were accustomed to preserve their organic rarities in honey, as we do in alcohol. Savages often, in the present day, smoke-dry their dead by way of preserving them; but in some places, as Nova Scotia and Otaheite, embalming has been in use from time immemorial.

(a) This singular effect of water, as “a sore decayer of your whorson dead body,” was noticed for the first time during the extensive exhumations which took place at the Cimetière des Innocens, at Paris, about fifty years ago, and was most remarkable in those bodies which had been buried about three years. It was proposed to turn the discovery to useful purposes first by Dr. Smith Gibbs, Phil. Trans. 1794 and 1795, while the first satisfactory explanation of the *rationale* of the process was given by Chevreul.

(b) This fact has been established by Devergie, by whom the spontaneous changes of the several parts of the human body in water have been particularly investigated. (Ann. d'Hygiène Publique, 1829).

(c) Petit.

(d) It is related that the body of Tullia, the daughter of Cicero, was discovered perfectly sound in the pontificate of Paul III., after having lain in the ground fifteen hundred years; and the same was the case, according to Lactantius, with the body of Maximianus, which was disinterred at Marseilles, after eight hundred years interment. It is said, also, by Jones, that the body of Vladimir, who first introduced Christianity into Russia, is still to be seen quite entire, with that of his mother likewise, in the church of St. Sophia, at Novogorod; as is that of the Duc de Croz, covered by a glass case, in the church of St. Nicholas, at Revel. A similar story is related of the corpse of a man of the name of Bancroft, interred in St. Helen's church, Bishopsgate, London, which was annually exposed for many years, in conformity with his will, and constantly found unchanged. Numerous other accounts of this kind are on record; but they are for the most part so ill authenticated, that it would be idle to speculate upon them.

At our last meeting, I made some general observations on the nature and treatment of hydrocephalus; and I shall now place the received opinions in the simplest order, so that the youngest of my auditory cannot fail to be informed on the subject.

The history of congenital dropsy in the brain, justifies the conclusion that the treatment of intra-uterine hydrocephalus is by no means determined. It is difficult to suspend the nutritive action of the brain, caused by an increased quantity of blood in the organ, and to excite the absorption of the effused fluid. Do the remedies which strengthen the lymphatic system possess any preservative power? In adopting the affirmative of this question, M. Gardien preserved, an infant whose four brothers had died between the fourth and fifth month of hydrothorax (Capuron). It generally happens that a woman has seldom more than one hydrocephalic infant; but if her offspring were remarkable for large heads, analogy would justify the use of remedies during utero-gestation. When the disease becomes chronic, or appears after birth, a variety of remedies are employed, and these are varied according as the disease is acute or chronic.

Acute Hydrocephalus.—This disease generally affects children before the seventh year, from this age to puberty, and rarely adults. It is preceded by lassitude, slight fever, pain or heaviness of the head, and then slow labouring pulse, dilated pupils, somnolence, drowsiness or stupor.

Hydrocephalus usually attacks children of a scrofulous habit, but others free from any disposition to this disease. It is divided into a febrile stage, a stage of stupor, and a stage of effusion.

Symptoms of the Febrile Stage.—Languor, lassitude, loss of appetite, thirst, peevishness, pain in the head, frequent or constant vomiting, tongue white, bowels obstinately confined, skin hot, countenance pallid or flushed, intolerance of light and sound, frequent, sharp, strong pulse, fever remittent, generally increased towards evening, pulsation of the carotid and temporal arteries; excessive pain in the head, restlessness, screaming, pulse 130 to 160, respiration accelerated and soon retarded, great moaning, and finally stupor.

Symptoms of the Torpid Stage.—Pain in the head and vomiting increased, incessant rotation or rolling of head, grinding or gnashing of the teeth, pulse slow, or rapid; rubbing of the forehead with the hands, or raising the hand towards the forehead, strabismus or squinting, respiration at one moment slow, and another rapid, sensation diminished, vision, audition, olfaction, gustation and palpation decreased or suspended, obstinate costiveness, retention or incontinence of urine.

Symptoms of the Stage of Effusion.—The vomiting ceases, the stupor is profound for some time, the pupils are dilated, the pulse is remarkably slow, or frequent, sometimes so high as 200 or 250, vision is lost, there is paralysis of one or both sides of the body, great groaning, convulsions, clammy cold sweat on the extremities, a diminution of these symptoms, or death, closes the scene.

The exciting causes are injuries on the head, frequent stooping or incurvation of the body, in which young children very much indulge, excessive exercise, exposure to great heat, hooping-cough, dentition, measles, scarlatina, small-pox, sudden disappearance of other eruptions of the skin, convulsions, infantile remittent fever, &c.

The predisposing causes are excessive development of the brain, scrofula, and a debilitated constitution.

Diagnosis.—Hydrocephalus is frequently mistaken for vermination (worms), marasmus, infantile remittent fever, and dentition.

In cases of worms, the appetite is variable, sometimes absent, sometimes voracious; the bowels are very much relaxed or confined, the pain in the head is periodical or intermittent; and worms are sooner or later expelled.

In hydrocephalus, there is a large head with copious capillary growth, there is constant want of appetite, the bowels are obstinately confined, the pain in the head is constant and excruciating, there is intolerance of light and sound, pulsation of the carotid and temporal arteries, heat of the scalp, &c.

In marasmus, the febrile symptoms are absent or remittent, but seldom constant. In infantile remittent fever, the infant is feverish in the evening, or at some particular hour of the day; at other times apparently well, but debilitated, until the feverish symptoms return. In acute hydrocephalus, there is scarcely any well marked remission of the symptoms, vomiting does not relieve the pain in the head, but usually increases it; intolerance of light and sound continues, as well as the increased action of the arteries of the head and neck.

The diagnosis of dentition and hydrocephalus may be easily established. The state of the gums, the copious flow of saliva, the elevation of the hand towards the mouth, the pain caused by warm or cold fluids when taken into the mouth, the pain on pressing of the gums, and the removal of all these symptoms by incising or cutting the gums, enable us to form a correct diagnosis. Incision of the gums will not relieve the symptoms of hydrocephalus; the pain in the head will continue after the operation, so also will the intolerance of light and sound, the obstinate constipation, the remarkable dejection of the countenance, the vacillation of the pulse, the inability of the patient to re-

tain the erect posture, the stridulous or sharp intonations of the voice, the squinting, dilated pupils, constant rotation or rolling of the head, grinding or gnashing of the teeth, coma, or frequent convulsions, paralysis of one or both sides, and laborious or difficult respiration, which characterise hydrocephalus.

The prognosis is favourable when the disease is treated in the first stage, when the bowels are steadily acted on by medicines, when vomiting may be speedily relieved, when the remedies employed are efficacious, and when the headache, pulsations of the arteries, and fever are controllable.

The prognosis is unfavourable, when the first stage passes rapidly into the second, if the strabismus, dilatation of the pupils, coma or convulsions are present; when there is gnashing of the teeth, convulsions, rolling of the head, paralysis of one or both sides, blindness, the pulse being very slow or rapid, the prognosis or result is very unfavourable.

Pathology of acute Hydrocephalus.—M. Charpentier, in his work—*De Nature et du Traitement de la Maladie Hydrocephale aigue (meningo-cephalite des Enfants)*, 1829, informs us that he observed the disease at the Hospital des Enfants in Paris, in 1824, and denies the conclusions of many of his predecessors.

After the most sober reflection on all the facts, reasonings, and analogies put forth by former writers, he contends that the effusion of fluid into the ventricles does not constitute the disease, that it is but the effect—an effect much less important than is thought, because it does not modify the progress, the symptoms, or reveal its own presence, and does not offer any particular curative indication. He thinks the term acute hydrocephalus extremely unfortunate, as it gives a false notion of the cause and treatment of the disease. He considers the brain, and not its membranes, the primary seat of the disease; and in proof of this opinion, he refers to the symptoms, the progress of the malady, and the appearance of the organs after death. After a long discussion on these points, he concludes that acute hydrocephalus is a combined inflammation of the brain and its meninges—a meningo-cephalitis, but most frequently it is not discoverable in which tissue inflammation commences. He is of opinion, that the condition of the brain and its membranes which constitutes hydrocephalus in infants, produces atonic fever (low nervous fever), in an individual more advanced in life, and serous apoplexy in the aged. There is in fact a simple difference of form, but not of nature. He combats the assertions of MM. Parent, Martinet, and Serres, who attribute the symptoms of acute hydrocephalus to arachnitis at the base of the brain, referring arachnitis of the convexity to adults, especially in atonic fever, the essential character of which is delirium. In fact these writers

assert that delirium exclusively depends upon meningitis on the convexity of the brain. M. Charpentier very justly asserts the contrary, for in the greatest majority of cases of arachnitis in the basis of the brain, he observed traces of inflammation at the same time on the membranes of the convexity, and he considers the defect of delirium in cerebral affections of infants, as dependent on the state of the intellectual faculties in the first years of life, and his opinion seems well founded, for in 125 cases of meningitis reported by the writers already named, delirium was not observed before the eighteenth year, and there was arachnitis on the convexity in thirteen cases, the subjects of which were under that age. It is to this difference of age M. Charpentier properly ascribes the hydrocephalic cries, and the frequent convulsions; but he thinks the dilatation of the pupils, their oscillations, and their insensibility, rest upon this—that the base of the brain is oftener affected in infants than in adults. Dr. Abercrombie asserts that the seat of effusion varies in different cases; it is found in the ventricles, under and over the arachnoid, between the layers of the septum lucidum. He also has shewn that the effusion depends on inflammation in the substance and central parts of the brain, and that it terminates by remollissement or softening. M. Martinet observes, in his *Pathology*, speaking of the morbid appearance in acute hydrocephalus—"The arachnoid membrane lining the lateral ventricles and base of the brain, presents no alterations on the convexity; it is rather dry: the superior convolutions of the hemispheres are depressed and flattened, and when touched give a sense of fluctuation; the lateral ventricles, considerably dilated, are filled with a limpid, straw-coloured fluid, without any flocculi; the dilatation is most manifest towards the digital cavity; the third and fourth ventricles are considerably enlarged. Sometimes no fluid is found in the ventricles, though dilated, which arises from the fluids being absorbed immediately before death had occurred. The pia mater enveloping the external surface of the brain, may be injected with blood, but this is not a very frequent occurrence, and should not in any case be considered as the cause of the effusion into the ventricles. Finally, when the disease has lasted for a considerable time, the digital cavity, the fornix, and corpus callosum may become softened, in the same way as has been described when treating of arachnitis of the ventricles." It must be admitted, however, that his conclusions seem founded on observation and pathology; but he must be aware that the writers of this country have long since maintained the views now propounded—that the effusion of serum was the effect, and not the cause of hydrocephalus. The disease is generally treated upon this pathology by nearly all British practitioners.

But this pathology is not received by all medical men in this or any other country, because considerable effusion of serum may be found in the cerebral ventricles of infants and adults, and no morbid lesion of the cerebro-spinal organs discoverable. It is unnecessary, I presume, to cite authorities on this point, which is universally admitted. I therefore think Charpentier has gone too far in dogmatically pronouncing meningo-cephalitis the morbid state which invariably induces effusion into the ventricles. The term meningo-cephalitis, proposed by M. C. is not more accurate than that already employed.

Upon a review of the opinions of this author, I find it necessary to make a few further comments. In the first place, he has been anticipated in his views of the morbid state of the brain, to which he very improperly refers every form of acute hydrocephalus. His countryman, M. Itard, had partly arrived at the same conclusion, that inflammation of the brain or its membranes produced the effusion. (*Dict. des Sci. Med. art. Hydrocephale.*) But Drs. Beddoes, Withering, Carmichael Smith, Quin, Rush, Cheyne, Yeats, and Ayre, had published similar opinions long anterior to either of the former writers. Again, we have the testimony of Quin, Cheyne, Warren, and Golis, that all the symptoms of hydrocephalus may be present, and no effusion found on dissection. Dr. Shearman is also of opinion, that the disease does not depend on inflammation, it is the result of excitement, favoured by fever and predisposition. We have also most respectable evidence against this author's opinion, that hydrocephalus is always an idiopathic disease of the brain. Hoffman considered stagnation of fluids in the duodenum a remote cause of cephalalgia, vertigo, torpor of the senses, and apoplexy. Dr. Cheyne maintains that hydrocephalus arises from sympathy with disease of the liver, and Dr. Anthony Todd Thomson adds his testimony in proof of this opinion, as he found the liver affected in nine cases out of eleven. Dr. Yeats also asserts, that the disease commences in organs remote from the brain. M. Itard states, that when the pain in the head is diminished, the epigastric region was painful on pressure. This writer is also of opinion, that irritation of the brain is sometimes a cause of the disease, and in some cases dentition, gastric and encephalic inflammation, extends to the stomach. He found the stomach the organ generally affected, next to the head, the intestines ulcerated, or invaginated, and the liver rarely affected. On the other hand, Dr. Golis informs us that he found all the alvine viscera generally healthy. In fact, M. Itard has anticipated the pathological views of this author, and published an essay on hydrocephalus, very far superior, both as to the nature and treatment of the disease.

Treatment.—The remedies in the first febrile or inflammatory stage of the disease are general and local bleedings, leeches to the base of the skull behind the ears, and on the neck over the course of the jugular vein, opening the jugular vein or temporal artery, repeated purgation with calomel, scammony, and other drastic remedies, croton oil, &c., the warm bath, with cold to the head while it is being employed, the cold dash or pouring cold water in a small stream through the pipe of a teapot, &c., cold or iced lotions to the scalp, mustard cataplasms, or fomentations to the legs and feet, friction on these parts with warm oil of turpentine, or blisters applied to the legs, thighs, or between the shoulders, to the nape of the neck, and lastly to the scalp.

In the second stage, when torpor supervenes, the free use of calomel in small and repeated doses, every second or third hour, mercurial inunctions over the angles of the jaws, on the axilla with a drachm of strong mercurial ointment every second, third, or fourth hour, according to the urgency of the symptoms. When the pulse is rapid, from 120 to 160, tincture or infusion of digitalis, and nitrous æthis are advisable.

Even in this stage, depletion is indicated, when the countenance is flushed, the pulse strong and sharp, the arteries of the head and neck pulsating, and the scalp hot.

In the third stage, when effusion has taken place, the indication of treatment is to cause its absorption by mercury, iodine, purgatives, diuretics, squill, digitalis, &c., &c.

Dr. George Armstrong was the first who reported three cases treated by mercurial frictions, and the internal use of calomel and oxymuriate of mercury. (*Treatise on Diseases of Infants.*) Six other cases successfully treated by the same remedies are recorded in the *Edinburgh Medical Commentaries*, and a seventh which was very much relieved. Professor Murray of Gottingen, speaks most favourably of mercury in his work on *Diseases of Infants*. Many eminent writers have strongly recommended the various medicines already mentioned—depletion, purgatives, refrigerents, and diaphoretics to abate febrile or inflammatory action, and to prevent effusion, and when this has happened, purgatives diuretics, mercurials, blisters, &c.

M. Charpentier has made the most serious omissions in the treatment. He has not recommended venesection, so much lauded by Beddoes, and we believe by Withering, Mills, Maxwell, Rush, and others. Dr. Maxwell asserts, that he cured sixty out of ninety cases by copious depletion. Dr. Beddoes considered depletion as necessary in this disease as in pneumonia. Dr. Golis recommended arteriotomy. But to this it may be replied, that excessive depletion causes effusion into the ventricles of the brain. Again,

Charpentier has omitted to mention the internal and external use of mercury. Dr. Percival was a strong advocate for this remedy, also Drs. Dobson, Mills, Cheyne, Fisher, Itard, and Jadelot. The last physician recommends mercurial inunction to the scalp, and repeated doses of calomel daily. Mercurials and antimonials are very generally employed in this country. Dr. H. Davis treated the disease successfully with mercurial inunction, calomel, and digitalis. Dr. Carmichael Smith employed calomel and squills, as also M. Labonnarderie, and Itard, squills and digitalis. Bricheteau and Flajani, laud squills alone. M. Itard is a strong advocate for the vapour bath, and the various remedies already enumerated, as well as those proposed by M. Charpentier. In addition, he advises repeated blisters to the extremities, neck, and head; in obstinate cases, moxa to the vertex, and a seton in the neck. Dr. C. Smith applied caustic to the vertex.

When depletion, purgation, counter-irritation, &c. have failed, some have advised a seton in the neck, moxas, antimonial ointment, repeated doses of calomel, 2 or 4 grains every second or third hour, or combined with James's Powder, while others advise nauseating doses of tartarized antimony. Martinet used frictions with squills and digitalis over the limbs and body, when the disease became chronic. MM. Recamier and Andrieux prescribed a bath composed of a pailful of water, and one ounce of tartarized antimony. I have used frictions with iodine advantageously. The following case now under treatment, and repeatedly observed by you all, proves the value of this remedy.

G. D. aged two years and a quarter, was admitted under my care at the Western Dispensary in November last. Her mother observed that the head of this infant was remarkably small at birth, but at the end of six weeks began to enlarge, since which time it has continued to do so. It now measures twenty-three inches in circumference. The infant has no power of voluntary motion, vision is lost, there is strabismus, almost constant moaning, the appetite is bad, the alvine dejections unhealthy, sometimes white, brown, and very offensive. The anterior and posterior fontanelles are enlarged, and the sutures are unossified. The parent stated that her parturition with this infant was natural. The digestive function was improved by calomel and rhubarb, with aromatic powder; and the head was rubbed with a drachm of the following ointment night and morning:—hydriodate of potass, $\mathfrak{z}\text{j}$, adeps $\mathfrak{z}\text{j}$,—she was also ordered a mixture composed of acet. potassæ gr. x , aq. $\mathfrak{z}\text{iss}$, syrup $\mathfrak{z}\text{iv}$: $\mathfrak{z}\text{j}$ 3 in die.

These remedies were continued for a month, during which the head decreased half an inch in circumference. The intellectual powers

began to develop, the appetite improved, alvine dejections became natural. The hydriodate was now substituted for the acetate, but this did not act as a diuretic or absorbent. The child continued to improve until Feb. 3rd, 1835, when she had acet. potass $\mathfrak{D}\text{ss}$ a. q. $\mathfrak{z}\text{ij}$; $\mathfrak{z}\text{i}$ 3 in die. 18th. The remedies are continued.

A few years since, this case would have been considered beyond the power of medicine; indeed, no remedy, except an occasional aperient, would be prescribed. But the success of Dr. Conquest and Mr. Russell in curing chronic and even congenital hydrocephalus by paracentesis cranii (tapping the brain), has convinced the profession of the propriety of employing remedial measures. Lecat was the first to propose tapping the brain, according to Capuron; but the operation was rejected as rash by Camper. "This operation," says M. Capuron, "cannot repair the injured state of the brain when it is partially or totally destroyed. It therefore appears to be condemned and disapproved of by nature herself, as infants always perish when the meninges (membranes of the brain) and scalp are spontaneously lacerated.—*Traité des Maladies des Enfants*. Such was the opinion of the learned and experienced French professor some years ago; but he has lived to see it controverted by many successful operations.

According to Professor Velpeau, another distinguished French writer, tapping of the brain was proposed by Vose and Holbrook. It was, I believe, first performed unsuccessfully in this country by Mr. Angus, of Liverpool, and next by Mr. Callaway, of Guy's Hospital. But Dr. Conquest, late of St. Bartholomew's Hospital, was the first practitioner in this, and perhaps in any other country, who performed it successfully. The following is his account of the operation, as published in the London Medical Gazette, 1830. He introduced a trocar obliquely—

"Close to the edge of the right frontal bone, about midway between the crista galli process of the ethmoid bone and the anterior fontanelle, so as to avoid the longitudinal sinus on the one hand, and the corpus striatum on the other. The instrument entered about two inches below the scalp. An ounce and a half of bloody serum, mixed with portions of cerebrum, escaped. The pulse became feeble, and temporary collapse followed. The fluid was allowed to escape stillicidium, and within eight-and-forty hours about two pints and a half flowed out of the opening. Almost immediately after the operation, the pupils became sensible to the stimulus of light; the drowsiness was succeeded by disinclination to sleep, and the pulse, which had always before been remarkably slow, became about eighty-five. Two days after the operation, the brain evidenced signs of inflammation, with high constitutional disturbance; and great alarm was excited by a rather formidable at-

tack of convulsions. Leeches to the temples, and the constant application of cold to the head, subdued the local inflammation, and within four-and-twenty hours all became tranquil. The head was well strapped, and from the cessation of cerebral excitement no unfavourable circumstance occurred.

"When this interesting child was exhibited to the class on Saturday evening, every one was struck with the improvement of its appearance, and by the intelligence and cheerfulness of its countenance." Dr. C. stated that he considered it perfectly well, and as exhibiting a most gratifying and triumphant proof that this seemingly formidable proceeding might be safely and successfully adopted under similar circumstances.

The other case, to which the doctor has often adverted during the winter, he operated on last autumn, assisted by Dr. Hodgkin, the talented pathologist of Guy's Hospital. Nine ounces of serum were withdrawn from the posterior fontanelle. The head became lessened six inches in circumference, and no increase in its size has yet recurred.

When I was about to edit the last edition of Dr. Hooper's Physician's Vademecum, which the celebrated author declined, on account of indisposition, I requested Dr. Conquest to favour me with an account of his success in tapping the brain. He very politely and readily complied with my request, in these terms:—

"My first successful operation was performed at St. Bartholomew's Hospital in the autumn of 1829, when only $\frac{3}{4}$ iss of serum escaped, but during the subsequent two days, not less than $\frac{3}{4}$ xiv flowed. The child had been the subject of frequent convulsions, &c. before tapping; but only one paroxysm followed. Two years afterwards the child was in perfect health. The second patient was tapped thrice; first on the 20th of November, when $\frac{3}{4}$ xij of serum were taken away; secondly, on the 2nd of December $\frac{3}{4}$ viij were evacuated; and on the 16th $\frac{3}{4}$ ij. Dr. Hodgkin assisted me in this case.

"The third terminated fatally after drawing $\frac{3}{4}$ lvijss by five operations, a fortnight intervening between each.

"The fourth case was and is a patient of Dr. Caldwell of the City Dispensary. $\frac{3}{4}$ xxiv of serum were taken away by two operations, $\frac{3}{4}$ xij of fluid escaping each time, a month having intervened between them."

In the *Lancet* of September the 15th, 1832, Dr. C. details the case, and states that at the end of two years the child continues well.

"The fifth patient is a child yet living, but will eventually die. I have tapped it four times since February, 1832, and taken away $\frac{3}{4}$ xlv altogether. I believe the child would have recovered had the parent consented to one or two more operations.

"I have operated on five other cases; in one instance the child survived (two tappings,

one of $\frac{3}{4}$ xvj, the other of $\frac{3}{4}$ xij) six months, and then died of hooping-cough. In another case, the infant lived some months, and was carried off by teething. Another case is yet under my care, promising to do well, having been tapped three times, and the others ended fatally." December 7, 1832.

Mr. Russell, of Aberdeen, details the following case. A fine trocar, such as is used for hydrocele, was introduced into the head of a female infant aged eight months, about half an inch in depth on the right side of the anterior fontanelle; and three ounces of serous fluid were discharged through the canula. A piece of adhesive plaster was applied over the wound, and a roller round the head. A slight degree of fever followed. In ten days afterwards a similar puncture was made on the opposite side, and five ounces and a half of turbid serum were evacuated. No unfavourable symptom followed. In five days afterwards the head was diminished two inches and a half in circumference, and two and a quarter across the vertex. In a fortnight after the last operation the trocar was passed near the first position in an oblique direction into the ventricle, when nine ounces of serum escaped in a continued stream. The pulse became weak and feeble, and she became faint; but she soon revived, and no bad symptom followed. She recovered completely, and became a lusty child of her age. —*Edinburgh Medical and Surgical Journal*, July, 1832. *Vide Dr. Hooper's Physician's Vademecum*, 1833.

I need scarcely remind you that the experiments of various modern physiologists who incised the brain without destroying the lives of the lower animals, and the fact that musket balls have been lodged in that organ for a long time with impunity, and even a great portion of the hemisphere were often destroyed. Hennen, Larrey, and Cooper, shew the feasibility of the operation under certain considerations. A British practitioner is entitled to the honour of having established the operation of tapping the brain! The operation will henceforth be performed when circumstances demand it. Some of our Gallic contemporaries appear unacquainted with the progress of surgery in this country. Thus, the late M. Billard, the indefatigable observer of infantile diseases, and upon the whole one of the most experienced in infantile pathology of modern times, thus expresses himself:—

"I believe it will be difficult to establish the treatment of this disease (congenital hydrocephalus). How can we diminish the nutritive activity of the organ (brain), and effect the absorption of the effused fluid? Nevertheless, authors have advised different means, among which I shall particularly state mercurial frictions. These were first employed in this disease by Armstrong (George); and Lefebure de Villebrune has detailed, in his translation of Underwood, many cases by

Armstrong and Hunter, in which the efficacy of this remedy is evident. But it is to be remarked, that the infants who were the subjects of this disease were advanced in age, and presented the symptoms of acute or chronic meningitis before the simple effusion of serosity into the cerebral ventricles. I therefore think it useless to try any remedy when hydrocephalus is not caused by any particular accident, and that we must confine ourselves to hygienic measures, of which the chief object should be to avoid all cerebral excitement. If meningitis should supervene, we must have recourse to the remedy which I have advised in giving the history of this disease."—*Traité des Maladies des Enfants Nouveau-Nés et à la Mamelle; Deuxième Edition, &c.; Par M. de Olivier (D'Angers), 1833.*

It appears from the statements already advanced in this lecture, that tapping the brain is not justifiable until all other remedies have failed. It is also evident that the operation is safe and successful even as a last resource.

It is important to be aware of the fact, that mercury, when used in excess, has produced the worst results. Though it is barely possible to salivate a child afflicted with hydrocephalus, yet destructive gangrene of the cheek and gums has been frequently induced by mercury; and the lower jaw has been separated from its fellow by this remedy. A practitioner, whose self conceit and vanity far exceeded any thing I have ever observed or imagined, and who was a most ignorant person withal, prided himself on having arrested hydrocephalus by mercury, though the articulations of the inferior jaw-bones were destroyed, and the miserable infant was deprived of the lower part of the face. I need scarcely state that it died in a short time, notwithstanding the cure of its hydrocephalus! Every experienced and rational practitioner well knows, that in urging mercury in excess, he runs a great risk, and can never calculate upon the consequences. Digitalis is also a most dangerous remedy, in truth, a powerful poison when administered too freely. I am well aware that dangerous remedies ought to be tried, when all others have failed, and when a disease appears to be hopeless; but they are always administered in such cases, by experienced practitioners, with caution, and often with dread. It is of little consequence whether an infant dies of hydrocephalus, or the bad effects of mercury or digitalis. We should always remember the infantile constitution; and if we do, we shall invariably urge dangerous remedies with fear and trembling. We have now the satisfaction to know that tapping the brain is successful when all medicines have failed. But this operation cannot be performed in acute cases. A child may be destroyed by congestion of the brain without an effusion, or with a small quantity of effusion; and in such cases the brain, or its membranes, are not only inflamed or congested, but the substance

of the former may be slightly, if thinned at all. It is, therefore, one thing to pass a sharp instrument through a brain as thin as paper, a condition common in congenital or chronic hydrocephalus, and another, through an organ of ordinary thickness. Lastly, we should never forget that all the symptoms of hydrocephalus and of apoplexy, may be present in cases of congestion of the brain or its membranes, without any effusion whatever; and therefore, it behoves us to be extremely cautious in proposing or employing tapping of the brain, unless the history of the case justifies such a proceeding. There is another practical observation worthy of remembrance in treating diseases of the brain. It is the impropriety of applying leeches, cupping, or blisters on the scalp. These only increase the determination of blood in the affected organ. (Sabatier, Copland, Graves, &c.). Dr. London of Leamington caused the greatest tumefaction of the breasts in amenorrhœa, by repeated applications of leeches to the mammae; and the late Mr. Ware had previously observed, that the application of leeches round the eye, greatly aggravated ophthalmia. Looking at the circulation of the blood as a circle, I feel convinced that more good will be done by applying leeches round the arms, to the thighs, or other parts remote from the brain in hydrocephalus (a practice adopted by our continental contemporaries), than by applying them directly to the scalp. The application of a small stream of cold water to the head (cold dash) while the patient is in the sitting posture in a warm bath, is also scientific practice. The cold lessens the quantity of blood in the brain, while the warmth determines it to all the rest of the body. The warm bath, unless cold be applied to the head at the same time, will and must do more harm than good. It is also most important to keep the head raised, so as to facilitate the return of the blood from it. The constant application of cold or freezing lotions, bladders of cold water, ice, snow, &c. to the head, has often preserved life, when every thing else has failed.

Counter-irritants to the lower extremities are of immense value in acute head affection. But they must not be applied too long, or they will induce ulceration, gangrene, or sloughing.

But there are some cases of congenital and chronic hydrocephalus, in which the substance of the brain is reduced by the absorption caused by the pressure of the effused fluid to extreme tenuity, to the thinness of gauze, in which all remedies are useless. Suppose a brain so constituted was tapped, we could not possibly expect, that the organ might regain its pristine consistence and substance. The probability would be, that if we drew off the effused fluid to day, it would be regenerated to-morrow. But if our patient was young and undeveloped, our prognosis would be the more favourable; because

in such cases, hydrocephalus may exist to a certain extent, without causing destructive absorption of the cerebral substance. It would be one thing to see a child confined to the recumbent position, deprived of sense and motion, with the head inordinately enlarged; and another to observe it with diminished sense and motion, but in the partial enjoyment of its intellectual and physical powers. In the latter case, the operation of tapping would be infinitely more feasible. It is therefore obvious, that paracentesis cranii, or tapping of the brain, must not be resorted to unless in certain cases of hydrocephalus.

In conclusion, I have to inform you, that mercury has been administered in immense quantities in chronic hydrocephalus, and that it finally effected a cure. This practice was rash, but it is considered right to follow the old maxim—in dangerous diseases we must use dangerous remedies. When every thing else has failed, and our patient is considered in a hopeless condition, we are justified in administering any remedy, though a violent or dangerous one, which has effected a cure under such circumstances. In hydrocephalus, or other diseases of the brain or its membranes, I am decidedly opposed to the application of leeches to the temples or scalp, to blisters, moxas, issues, or setons; as every one of these must increase determination of blood to the brain and scalp, and do much more harm than good. I can fancy cases in which the pressure of serum or blood on the brain, or a congestion of brain or its membranes, may dull sensibility, may even obliterate it in the head; and in such cases only are the remedies I object to justifiable. I feel convinced that the indiscriminate use of these remedies in acute diseases of the brain only expedite the fatal termination.

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Rebiew.

An Inquiry into the Nature and Properties of the Blood in Health and in Disease. By the late Charles Turner Thackrah. Edited by Thomas G. Wright, M.D. To which is added a Biographical Memoir of Mr. Thackrah. London. 8vo. 1834. pp. 246.

(Concluded.)

THE fifth chapter is on the diversities of property in blood from different vessels of the same order. This is a subject which has nearly escaped the attention of preceding physiologists; it is, however, one of considerable interest, and has been illustrated by Mr. Thackrah in a series of experiments.

We have only room for some of the most important inferences. From a comparison

of blood taken from the jugular vein and vena cava inferior, it results—

1. That concretion* almost always takes place sooner in blood from the cava than in that from the jugular.

2. That the solid contents are larger in proportion in jugular than in caval blood.

3. That the proportion of fibrine is less uniform in jugular than in caval blood.

Our author's next observations were made on the blood of the vena portæ, and his conclusions are—

1. That the blood from the vena portæ is darker and of a browner tinge than that from other veins; that it has not the homogeneous character of other blood, and that its appearance gives the idea of defective elaboration.

2. That there is no marked difference between the specific gravity of portal blood and that of blood from other veins, or from arteries.

3. That in ordinary circumstances portal blood concretes much sooner than blood from other veins.

4. That portal blood contains about 1-10th to 13-10ths more serum than blood from other veins.

5. That the process of coagulation is slower and less perfect in portal than in jugular blood.

6. That the serum of portal differs in colour from that of jugular blood.

"Portal serum is always red; while jugular, if agitation be avoided, is straw coloured. The hue of the portal evidently depends on the detention of red particles of the blood. Does this detention arise from a difference in the sp. gravity of these particles? or from a diminished power in the crassamentum to attract or envelope them? or from a change in the serum, enabling it to hold in solution what other serum precipitates?"

"With the view of throwing some light on these questions, a definite quantity of the serum of portal blood was poured on the crassamentum of jugular blood, and a like quantity of the serum of jugular blood, taken from the same animal at the same time, poured on portal crassamentum. At the end of twenty-four hours the fluids were separated as carefully as possible from the solids. We found, in the first place, that

* By the term *concretion*, the author means, throughout the work, the *commencement* of the process of coagulation.

we could not obtain from the portal crassamentum the quantity of serum that had been poured on it: about one-sixth part was lost in the coagulum. The whole of the serum added to jugular crassamentum, on the other hand, was re-obtained without difficulty. In the next place, we observed that jugular serum which had been poured on portal crassamentum attained the red hue always seen in portal serum. Finally, the weights showed that the jugular serum had gained more from portal crassamentum than portal serum from jugular crassamentum.

"These observations, made in three experiments, led to the opinion that the difference uniformly remarked in the colour of portal serum, does not depend on a peculiar power in this fluid of absorbing or holding the red particles in solution, but on the state of the crassamentum, in portal blood."

7. That the specific gravity of portal serum, when merely poured off from the coagulum, is rather greater than that of jugular, when poured off in the same manner; this, however, probably arises from the detention of red particles in the former.

8. That portal serum concretes more quickly, but less completely, on the application of heat, than jugular.

9. That the disposition to putrefaction is less in portal than in jugular serum; the former yields a peculiar animal odour, while the latter emits a pungent ammoniacal smell: the same remark is true of the dried contents of the two kinds of serum.

10. That portal serum affords more solid matter than jugular; this however arises from the red particles detained in the former, since, when separated from these, portal serum appears to contain no larger, but probably even a smaller, proportion of solid matter than jugular.

11. That the crassamentum of portal blood is always of a looser texture than that of jugular, and contains serum up to the period of putrefaction.

12. That portal blood contains, in general, a much smaller proportion of fibrine than jugular.

13. That portal blood in general contains a much less proportion of albumen and hæmotosine than jugular.

Mr. Thackrah makes the following physiological reflections on the results of his experiments on portal blood:—

"The less elaborated and more liquid state of portal blood tends to show a source of

supply not generally supposed. If this blood be less rich, we can refer the difference only to the admixture of a diluent. And whence can this fluid be derived? Only, I conceive, from those surfaces on which we find the ramifying origins of the vein: the alimentary canal, and the stomach in particular, present a source of supply. Much of the liquid we drink is taken up, I conceive, by vessels which open directly into the radicles of the vena portæ, and thus enters the circulation without passing through the route of the lacteals. To physiologists it has long been a matter of observation and surprise that certain drinks show themselves in secretion much too soon to have traversed the intestinal lacteals, mesenteric glands, thoracic duct, and general circulation. Here we have a probable explanation of the fact. The fluid received into the stomach is rapidly taken up into the vena portæ, transmitted through the hepatic veins into the cava, and thence thrown into the current of the circulating blood.

"From the muddy character of portal blood, the tardiness and imperfection of its coagulation, and of the coagulation of its serum by heat, it seems probable that something more than water is taken up by the vein. Is it albumen in an imperfect state of elaboration?—The comparative rapidity of concretion arises, perhaps, from a lower state of vitality in the vessel.—The quantity of albumen is on the whole less in portal than other blood, but this does not militate against the supposition that a quantity of fluid, as taken up by the radicles of the vena portæ, contains a portion of this substance in an imperfect state."

He concludes the chapter by observing—

"Blood from the vena cava was examined in many of the experiments which investigated the contents of the vena portæ, as contrasted with those of the jugular. A considerable diversity was found, but the details are not sufficiently numerous and accurate to lead to any positive inferences. I may state, however, my conviction that there is a great difference in the state of the blood in different parts of the circulation, and consequently that the general opinion is incorrect, which considers the blood uniform in every thing but colour. I may hint also my suspicion that if the contents of four or six large vessels in different parts of the body were examined, no two specimens would be found the same, or even nearly the same, in their constituents and proportions. This opinion, if proved to be correct, may not be unimportant in therapeutics.

"Blood is a varying fluid. It varies every moment even in the same vessel; and at no time can we obtain blood with the same proportion of elements from two vessels even of the same order and size. The current of circulation is, like the stream of human life, incessantly pursuing its round, but as inces-

santly changing its elements. Sometimes much is thrown out of the blood by the secretions; sometimes much is taken up by the veins or lymphatics: and this contrast and variety are as applicable, I believe, to a single vessel as to the whole system. We at once see both the importance of this property, and the difficulty which it presents to the physiological investigation of this chapter. No two blood-vessels will yield at one time a fluid precisely similar; and I conceive that ignorance of this fact has occasioned many of the errors and the discordant statements of experimenters on the blood."

The sixth chapter, on the differences between arterial and venous blood, is added by the editor, who has incorporated with it some experiments illustrative of this subject, which the author did not live to prosecute according to his intention. The following experiments and observations on the chemical analysis of the two kinds of blood are worthy of observation:—

"Chemical Analysis has detected only slight differences in the composition of these two fluids. Arterial blood generally appears thinner, and yet it is found to exude less serum than venous. Its odour is also stated to be more pungent. Dr. Stevens asserts, that 'there is not one particle of free carbonic acid in healthy arterial blood,' but 'that it exists in the venous, even in that of the smallest veins.' Mr. Thackrah has ascertained the relative proportions in two instances.

"Exp. CLVI. Portions of blood taken from the femoral artery and the jugular vein of a small dog, analysed twenty-four hours after being drawn, were found to contain—

Arterial Blood.			
Serum	439.6	or 10 : 12.7.	
Crassamentum	560.4		
<hr/>			
	1000.0		
Venous Blood.			
Serum	515.2	or 10 : 9.0	
Crassamentum	484.8		
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	1000.0		
Dried fibrine.....	1.8		2.4
— serum.....	45.4		41.0
— crassamentum, 106.0			130.4
Water	846.8		826.2
<hr/>			<hr/>
	1000.0		1000.0

Exp. CLVII.

Blood of a dog from the		Jugular vein.	
axillary artery.			
Dried fibrine.....	3.0		3.2
— serum.....	53.0		40.7
— crassamentum, 209.0			194.5
Water	735.0		761.6
<hr/>			
	1000.0		1000.0

"Of their ultimate constituents MM. Maccaire and Marcet have detailed the following average:—

In Arterial Blood.			
Carbon.	Oxygen.	Nitrogen.	Hydrogen.
50.2	26.3	16.3	6.6
In Venous Blood.			
55.7	21.7	16.2	6.4

"In this table we observe that venous blood contains 5.5 per cent. more carbon, than arterial, and is deficient in almost an equal proportion of oxygen. The changes which take place during respiration satisfactorily account for this, as shown by the interesting experiments of Priestley, Lavoisier, Davy, Allen and Pepys, Dr. Edwards, and many other distinguished philosophers, to whose writings it is unnecessary further to allude. Dr. Dalton ascertained that eleven ounces and a half of carbon were taken into the stomach daily by a person in ordinary health, in his solid and liquid food, and an equal quantity daily given off from the body, of which ten ounces and a half are supplied from the venous blood, and expired in the form of carbonic acid gas."

The seventh chapter treats of the influence of different states of the animal system on the blood. We shall here only notice those points which the author has illustrated by original observations:—

Effects of Digestion and Diet.

"Digestion and Diet have, of course, a great effect on the blood. When the digestive organs are impaired, the chyle must be different in quantity or quality, and the blood consequently degenerate from a state of perfect health. Habitual vomiting is said to reduce the proportion of red matter, and to increase the element of water. Fasting will be expected to have a similar effect."

The following are the general conclusions, from numerous experiments, on the effects of fasting; the blood was taken from the jugular veins of dogs at different periods after feeding, but the effects of extreme inanition were not investigated:—

"The specific gravity of the blood was examined in many cases; but some doubt as to the accuracy of the several observations leads me to omit them. I may state, however, that they exhibited a universal superiority of specific gravity in the blood of dogs which had fasted.

"From the preceding table it appears, that blood from the fasted animal does not so quickly concrete; that its serum contains a proportion of albumen about equal to that from one recently fed; that its crassamentum yields rather more læmatosine, albumen, and fibrine; and, as a consequence of all these, rather less water. The blood, in

fact, is rendered somewhat denser by inanition, though, on the whole, the contrast is by no means striking.

"The principal difference lies in the period of concretion. Is not the greater disposition to cake, in blood from a recently fed animal, dependent on that want of vital energy in the general system, which results from the activity of the digestive organs, and the more than ordinary quantity of this energy which they demand. I scarcely need refer, in illustration, to the well known languor, chilliness, and shivering which sometimes occur in man after a full meal, and to the more marked sluggishness and drowsiness which are constant in the dog. That the disposition in blood to concrete is proportionate to the debility of the system, we shall soon be able to prove and illustrate.

"The trifling excess of water in the blood of animals that have been recently fed, may be referred to the absorption from the stomach of the thinner parts of the aliment, before the more solid constituents can be elaborated by the small intestines and lacteals."

Mr. Thackrah made some experiments to ascertain whether the milky appearance sometimes observed in the serum of the blood, was dependent on digestion. The observations of Marcet and Berzelius renders it probable that the white substance is chyle not yet assimilated.

"What chemical observation leaves doubtful, physiological experiment has established. We find in dogs, that when the lacteals are fully distended, this cream-like appearance is almost always presented in the blood. Indeed, we can generally produce it at will by taking blood a certain time after a full meal. Without adducing observations which run through a course of experiments on other subjects, I give but one example.

"*Exp. CLXVII.* Four hours after a hearty meal, a dog was destroyed. The lacteals were found distended; and the blood from the jugular, portal, and caval veins presented a cream-like appearance in the serum.

"From such as this, contrasted with negative observations, we infer that *the substance mixed with serum is chyle not yet elaborated into blood.*"

Influence of Strength and Debility on the Blood.

Some experiments are detailed, made on animals bled to death, from which a comparison is drawn between different portions of blood received into vessels at intervals from the time of the animals being wounded to that of their death. From these experiments it appears—

"That in the dog, sheep, horse, and hog, the blood concretes slowly in regular proportion

to the tonic state, or that condition of the system in which the vital powers are strongest: blood received immediately before the death of the animal first assumes this change; next that which is taken at the middle period; and lastly, that which is received on the first effusion from the wound. In oxen, however, it was frequently found that coagulation took place most slowly at the middle period. At first I was at a loss to account for a circumstance so much at variance with almost every other observation. On reflection, however, I concluded that the mode by which oxen are slaughtered was the cause of this disparity; the animal being first stunned with repeated blows on the head, and afterwards bled to death by a division of the jugular vessels. The ox on falling, I conceive to be in a state resembling apoplexy, with the vital powers languid; but after the loss of a considerable quantity of blood, the nervous system is relieved of its burthen, and the constitution regains somewhat of its wonted vigour. Here, then, the powers of life are strongest at the middle period; next so is the first or comatose state; and the weakest is after great evacuations, or on the eve of death. I have further noticed, that when a comatose state is not induced, either from the inexpertness of the butcher in striking the ox, or from the animal being more than ordinarily tenacious of life, concretion commonly takes place in the same order as that which obtains in the blood of other quadrupeds. Coagulation was twice observed to commence slowly in the last-received portion of blood, but this exception being found only in the ox, may be attributed to the deranged state of the nervous system."

With regard to the exudation of serum, repeated and uniform observation has convinced the author that a state of debility causes a retardation or imperfection in this process. Blood taken from an animal in articulo mortis, never fully separates its serum, and rarely throws off even a small quantity: hence, although debility remarkably promotes concretion, it as decidedly retards and diminishes the exudation of serum; the crassamentum, therefore, retains a considerable proportion of this fluid.

The eighth chapter is on the peculiarities of the blood in different classes of animated beings. The whole subject is ably discussed; the author's own experiments, however, refer only to the following points:—

The relative quantity of Serum and Crassamentum.

"I examined," says Mr. Thackrah, "the proportion of serum to crassamentum in many experiments on various animals:

"In dogs the average appeared to be as 10 to 20 or 25
 Oxen, 10 to 16
 Horses, 10 to 13
 Sheep, the medium of some examples has been . . . 10 to 21
 While in others it was but as 10 to 8!
 Swine, 10 to 18
 Fowls, 10 to 16

"Although my experiments are far from evincing a disparity uniform in its reference to the classes of animals, yet it appears probable that a more complete examination would prove the *crassamentum* to bear a proportion to the strength and ferocity of the animal; since I never found the serum in such quantity as in the timid sheep, nor the *crassamentum* so abundant as in the predatory dog.

The Periods of Coagulation.

"In the blood of the Horse, concretion occurred in from 5 to 13 min.
 Ox, 2 to 10 —
 Sheep, hog, and rabbit, . . . ½ to 2 —
 Lamb, ½ to 1 —
 Dog, ½ to 3 —
 Duck, 1 to 2 —
 Fowls, ½ to 1½ —

"Haller observed that the blood of a mouse coagulates in a moment.

"From these observations a general inference may be drawn, that *coagulation commences sooner in small and weak animals, than in the large and strong.*"

The ninth chapter contains a very learned and judicious review of all that is known of the influence of disease on the blood. The author's own experiments relate chiefly to coagulation and the buffy coat. On the former point, his most important conclusions are—

1. That the speedy occurrence of concretion on the effusion of blood, is a sign of debility, and hence contra-indicates further depletion. The completion of coagulation does not observe the same regularity as its commencement, the perfection and duration of the process varying greatly; in a case of petechiæ hæmorrhage, related by Mr. Pretty in the London Medical and Physical Journal, the blood drawn showed no serum for eight hours, but afterwards separated a small quantity: if, however, on the division of the coagulum, at the expiration of from eight to twenty-four hours, no considerable effusion of serum ensue, and the *crassamentum* remain extraordinarily firm,

the author believes that further depletion is fully warranted.

2. That in *antonic* diseases the proportion of the *crassamentum* to the serum is increased, and, *vice versa* in those of an *atonic* kind; if, however, we find the serum in large proportion, with an extraordinarily firm *crassamentum*, we are not thence to infer debility; but if the relative quantity of serum be large, with a loose and yielding *crassamentum*, an atonic state of the system may be presumed to exist.

On the subject of the buffy coat, we find the following among other apposite observations.

"What is the buff-coat? Is it a new substance formed in the blood by disease? No: for examination proves the existence of its constituents in the blood, and shows displacement rather than creation. It is a network of fibrine enclosing serum. When pressed, the buff-coat yields a fluid which has all the properties of serum, and a substance which cannot be distinguished from fibrine. The serum drawn from the sizzly crust is stated by Dowler and Gendrin to contain a larger proportion of albumen than the serum of the rest of the blood. We found a result directly the reverse of this, viz.:—in 1000 parts of serum spontaneously exuded 134 parts of solid matter, while that of the same blood squeezed from the sizzly crust yielded but 65. The buff-coat is of greater specific gravity than the serum, a fact which I should not have noticed had it not been denied. The ratio of its solid and liquid elements, however, varies considerably. It is found in some cases to be mostly fluid; in others, it is tough and compact like leather. Yet this contrast of appearance of tenuity depends partly, I believe, on the period at which it is examined. As a specimen of the constituents of the buff-coat, I detail the following:

"Exp. CCXIII. To ascertain the proportions of solid fibrine and solid matter in serum of the buff-coat, it was carefully separated from the *crassamentum*; and after the serum had been squeezed from the fibrine, each was placed on a sand bath, and, when dry, their quantities estimated.

"Dry solid fibrine, 18
 Dry solid matter from the serum, . . 26
 Water, or loss by evaporation, . . . 56

Buff-coat. 100

"Since, then, the buff-coat is composed of fibrine retaining serum, is fibrine especially abundant in sizzly blood? Dr. Davy, from his observations, infers that there is no constant relation between the appearance of this tunic, and the proportion of fibrine; yet his tabular report shows, that in every case

but one the proportion of fibrine in buffed blood exceeded, and in most cases greatly exceeded, that which he marks as the healthy standard. From all the examinations we have made, I infer without hesitation, that buff-coated blood contains a considerably greater proportion of fibrine than healthy blood. In illustration, I may refer to the 12th section of chapter VII.

"How is the sily tunic produced? The question is not difficult of solution, if we bear in mind three circumstances: first, the increased quantity to which we have just adverted, of fibrine in sily blood; secondly, the apparent identity of the buff-coat, and the spurious membranes of disease; and thirdly, the absence of the sily crust in a perfectly healthy and unexcited state.

"From the blood are formed all the animal structures, and not less, of course, the adhesions of pleurisy than the fibres of muscle. It is obvious that provision must be made for such formations, and we find it in that great laboratory, the circulating system.

"Fibrine distributed in health in small proportions for the reparation of muscular and other structures, is increased for more extensive formations, and specially for adhesive inflammation; and from this excess of fibrine the blood drawn exhibits a fibrous crust. The greater specific gravity of the united hæmatosine and albumen, explains alike the general situation of the tunic and the prevention of a sily coat by agitation of the blood."

There is an appendix, containing some miscellaneous experiments, and detached observations, the notice of which we are obliged to omit. We regret much that our review of this admirable work, lengthened as it has been, is altogether inadequate to give a just view of the valuable matter it contains; but we must here conclude with a strong recommendation to the reader to peruse the entire volume diligently. Dr Wright has conferred a great benefit on the profession, by discharging his duty as editor in so able a manner, and thus doing justice to the memory of the lamented author. Mr. Thackrah was a young man of uncommon talents and great scientific ardour; let the College of Surgeons and the drug-vendors of Blackfriars take shame to themselves for driving him to a provincial school, by refusing to receive his certificates as a London Lecturer!

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The London Medical

AND

Surgical Journal.

Saturday, February 21st, 1835.

MEDICAL FEES OUGHT TO BE REGULATED BY A LEGISLATIVE ENACTMENT.

THERE is one subject connected with medical reform which has not, we think, been sufficiently attended to, and the neglect of which by the Legislature, at the present juncture, would render all attempts at improvement abortive—we mean the regulation of professional fees.

On glancing at the past history of the medical profession in this country, it cannot but be evident that the exorbitant rate of physicians' fees has not only been a serious evil to that particular class of practitioners, but has been productive of numerous inconveniences and anomalies throughout the profession. If there be one thing more absurd and more to be lamented than another in the present constitution of the profession, it is the strange union of physician and druggist, which constitutes an English apothecary. It would be incredible if it were not known to be true, that in a civilized age and nation, the largest, best informed, and most respectable portion of a learned profession should be absolutely compelled to degrade their own character and torture the palates of their patients by a system of humbug, at once ridiculous and loathsome.

And what is the origin of all this? The high fee of the physician. Originally, the apothecary was in England, what he now is in other countries, a person whose business it was to dispense prescriptions, but who had nothing to do with medical practice; but the high fee of the physician rendered it impossible for any but the wealthy to have recourse to his assistance: hence, according to the law by which

society always creates the means of supplying, in some way or other, its more important wants, the apothecary became the medical adviser of the poor; this was an inducement to him to acquire a certain knowledge of scientific medicine, which knowledge has advanced, step by step, till, in the present day, the apothecary is, generally speaking, inferior to the physician in no respect, superior to him in more than one, and has virtually become physician to the great mass of the community. It is obvious, that if the Legislature had not been shamefully negligent of medical affairs, and the profession still more shamefully negligent of its own affairs, the connexion between science and jalap would long since have been dissolved, and the general practitioner enabled to appear in his proper character.

But it may be asked, since the education of the apothecary is now to the full as complete, and perhaps rather more expensive than that of the physician, why do the greater part of the profession persist in being apothecaries instead of becoming physicians? Answer—Because the fee of the physician is so high, that only a few of the community can afford to employ him, and it is therefore long before he can get into practice; consequently, young men who have no sufficient means independent of their profession, that is ninety-nine out of an hundred, wisely decline practising as physicians—in other words, are not enamoured of starvation.

Such are some of the evils resulting from the guinea system. Those who are in the habit of reading this Journal are aware that we regard the present organization of the profession as radically wrong; that we hold it to be an intolerable farce for a beardless Doctor to pretend to direct the practice of a man old enough to be his father, and who may be infinitely his superior in talent, information, and experience;

that we think all medical men should be general practitioners at first, and no medical man should be an apothecary at all: but if the present system of things must endure for a while (we are quite certain that it will not be permanent), then, we say, let fees be so regulated throughout the profession, as to enable young physicians to get into practice; and to enable general practitioners to exercise fairly an honourable profession, instead of being immersed in the turpitude of an execrable trade. Execrable indeed it is; the business of the *druggist* is an honest and useful business, if reputably conducted; but for a medical practitioner to seek his remuneration by pouring floods of unutterably nauseous trash into the stomachs of his patients, is an alternative which every honourable man regards with contempt, and adopts with reluctance.

One thing more we have to remark concerning fees, namely, the absurdity of making them *honorary*—in other words, payable or not at the pleasure of the patient. We cannot form the remotest idea of what those persons mean who tell us that it is conducive to the *respectability* of the profession that the payment of fees should not be obligatory; which just amounts to this—that it is for the honour of the physician that every knave who chooses may cheat him and then laugh in his face. As reasonably might it be said that it is for his honour that all thieves should be allowed to rob, or all ruffians to assault him, with impunity—the whole affair is flat nonsense.

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Scarlatina.

M. Goëlis treats this disease according to the character of the fever. When the exanthematous eruption is incomplete, he washes the whole body with warm water—a treatment on which he places great reliance, and which he thinks preferable to the use of diaphoretics: these he never employs in the early part of the disease, for he considers them hurtful.

A NEW PRACTICAL FORMULARY

OF HOSPITALS, OR A

Collection of Formulae of the Civil and Military Hospitals of France, Germany, Italy, Great Britain and Ireland, &c., containing the Indication of the Doses in which simple Substances, magistral and officinal Preparations of the Codex are administered, the use of New Medicines, and general receipts on the art of prescribing. By M. EDWARDS, M. D., and P. VAVASSEUR, M. D., of the Hospitals of Paris—1834. Translated and augmented by M. RYAN, M. D. &c. &c.

(Continued from p. 86.)

Collyroire Alcaline. H. Militaires.

Rx. Potassæ subcarbonatis, 3j;
Mellis, 3ij ss;

Tere in mortario vitreo.

Red Collyrium. H. of Montp.

Rx. Potassæ subcarbon. gr. xxij;
Camphoræ, gr. x;
Aque destillat., 3ij.

In balneo aren. horis xxiv macera;
dein cola et adde,

Tincturæ aloes, in xxiv.

Used in opacities, or specks on the cornea.

Alkaline Pediluvium. H. St. Ant.

Rx. Potassæ subcarbonatis, 3viij;
Aque, q. s.

Ut fiat pediluvium.

Employed in the same cases as the mustard pediluvium.

Lotion used in Pernio. H. of Italy.

Rx. Potassæ subcarbonatis, 3ij;
Aque rosæ, Oij.

Solve.

Compresses dipped in this lotion should be applied to the affected part.

Alkaline Liniment. H. of Germ.

Rx. Potassæ subcarbonatis, 3ij;
Olei amygdalæ, 3iv;
Vitelli ovi, No. ij.

Fiat linimentum.

M. Plenck recommends this liniment in the treatment of chaps and excoriations.

Antipsoric Ointment. H. of Italy.

Rx. Potassæ Subcarbonatis, 3j;
Sulphuris præcipitati, 3ij;
Adipis, 3iv.

Fiat unguentum.

Quater in die, applicandum, partibus affectis.

BICARBONATE OF POTASSA.

It possesses the same action as the subcarbonate, without the caustic quality of the latter; consequently it is preferable to that medicine in many cases where it is necessary to administer it internally; nevertheless, it is not much used.

INTERNALLY. The same doses as the subcarbonate.

Eau méphitique Alcaline.

Rx. Potassæ bicarbonatis, 3ij;
Aque acido carbonico saturatæ,
Oij.

Solve.

3viij, ad xij. quotidie sumendæ.

As a tonic, diuretic, and antacid. It is also much used in calculous affections.

[D] dissolved in 3viij of water, and mixed with 3iv of lemon juice, forms an effervescing draught. T.]

SUBCARBONATE OF SODA.

It possesses the same medicinal properties as the subcarbonate of potassa; but, as it is not caustic, it is more frequently used. Preference is given to it in cases of acidity of the stomach, hooping cough, &c. Some practitioners use it in bronchocele.

Subst. incomp. The same as for the preceding substances.

INTERNALLY. As a stomachic and antacid, from gr. x—3ss in pills, with some bitter extract. As a diuretic, from gr. x—xx, dissolved in Oj of water.

Pills of the Subcarbonate of Soda. H. of Eng.

Rx. Sodæ subcarbonatis, 3liij;
Saponis duri, 3j;
Olei Carui, gut. x;
Aque, q. s.

Divide in pilulas, gr. ij, quarum capiat j—liij bis vel ter in die.

Absorbent Pills. H. of America.

Rx. Sodæ subcarbon.;
Pulveris rhei;
Extracti gentianæ, aa 3j;
Hydrarg. submur., gr. iij.

Divide in pilulas xx, quarum capiat unam mane vespereque.

[In acidities of the stomach, calculus, and other affections of the genito-urinary organs, when the urine is depositing lithic acid, in the ardor urinæ caused by gonorrhœa and strangury, induced by blisters. In these cases, 3j—iv, may be given daily in barley water, whey, linseed tea, &c. I have repeatedly employed it with success. It must not be continued when the urine deposits a whitish sediment (the phosphates). The soda powders, consisting of carbonate of soda, and tartaric acid, form artificial soda water, of which two or three glasses may be taken daily. The tartrate of soda formed by the union of the ingredients, often acts on the bowels as a mild aperient. T.]

Stomachic Boluses. (Swedhur.)

Rx. Sodæ subcarbonatis, gr. xij;
Cannellæ pulveris, 3iv;
Syrupi cinchonæ, q. s.

In bolos tres divide, quotidie sumenda.

Antinephritic Potion. H. of Lyons.

Rx. Seminum lini,
Adianthi, āā manip. s;
Aquæ fontanæ, Oj.

Coque cola, et adde,

Sodæ subcarbon., ℥j.

Dosis, cyathus sæpe in die.

[Linseed tea is an old remedy in coughs, gravel, and urinary diseases, gonorrhœa, &c. T.]

Lithontriptic Potion. H. of America.

Rx. Sodæ subcarbon., 3j;
Infusi quassiae, ℥iv;
Tincturæ calumbæ, 3j.

Dosis, cochleare amplum, quater de die.

Absorbent Potion. (Swediaur.)

Rx. Sodæ subcarbon., ℥ij;
Rhei pulveris, 3ij;
Syrupi simplicis, 3j;
Aquæ menthæ pip., 3viij.

Sit mistura, cujus capiat cochleare amplum ter quaterve in die.

Antiscrofulous Potion. Hotel Dieu.

Rx. Sodæ subcarbon., 3ss;
Tinct. gentianæ, 3j.

Fiat haustus, cujus sumat cochl. mag. ter quotidie.

The subcarbonate of soda is sometimes substituted for the soda.

EXTERNALLY in frictions. 3j to 3j of hog's lard.

In injections. 3j to ℥j, of a proper vehicle.

Lithontriptic Injection. H. of Montepelier.

Rx. Sodæ subcarbon, 3j;
Saponis, 3ij;
Aquæ, 3xij.

Misce.

Recommended for dissolving the calculi of uric acid.

Pommade used in Prurigo, called Pommade No. 4. H. St. L.

Rx. Sodæ subcarbon., 3ij;
Extracti opii, gr. x;
Calcis, 3j;
Adipis, 3ij.

Misce.

Employed with advantage in different kinds of prurigo.

The *Pommade Alcaline* of the H. des Ven, differs from the preceding one in not containing the lime, for which is substituted the subcarbonate of soda, and 3j of the compound wine of opium to 3j of lard.

BICARBONATE OF SODA.

The bicarbonate of soda possesses the same properties as the bicarbonate of potass, but is more efficacious. It is much used in calculous affections, and in various cases of difficult digestion, especially in patients subject to gout and gravel.

INTERNALLY, as a diuretic, gr. xij—3ss in an aqueous vehicle.

As a stomachic, gr ij—iv, in pastiles.

Alcaline Troches. (Magendie).

Rx. Bicarbon. sodæ, 3j;
Sacchari., 3ij;
Mucilaginis astragali, q. s.;
Olei, menthæ piperitæ gutt., iij.

Divide in trochiscos Lxxij asquibus, capiat ij vel iv statim, ante vel post prandium.

They should be kept in a bottle well corked. The oil of peppermint may be replaced by the balsam of tolu.

SQUILLS.

In large doses this medicine is an irritant, inducing nausea, &c.; in smaller ones, it is diuretic, and stimulates the mucous membrane of the bronchiæ. It is principally used as a diuretic and expectorant, sometimes as a general stimulant but in all cases is united with some other ingredient, such as opium, calomel, &c.

INTERNALLY. Powder, grs.—i—x in pills.

Pilules scillitiques. P. Gr. ij—vj, twice or thrice a day.

Poudre incisive. P. G. x—xx.

Tincture. P. Gutt. x—xxx in an emulsive or mucilaginous potion.

Vin scillitique. P. 3ss to 3j, in a proper vehicle.

Vinagre scillitique. P. 3ss—3j.

Oxymel scillitique. P. 3ss—3j, in a potion or proper vehicle.

Mel. scillitique. P. The same doses.

Expectorant Powder. Hot. D.

Rx. Scillæ, gr. xij;
Ipecacuanhæ, ℥j.

Divide in chartulas iv, quarum sumat unam tertiâ quaque horâ.

In chronic pulmonary catarrh, towards the end of pneumonia, &c.

Powder of Squills. H. of Eng.

Rx. Scillæ, 3j;
Potassæ tartratis 3ix.

Fiat pulvis, gr. x—xxx, bis vel ter in die sumenda.

As a diuretic, ten grains of this powder contains iij of squills.

Diuretic Powder. H. of Eng.

Rx. Scillæ, ℥j;
Opii, gr. iv;
Cinnamomi, 3j.

Divide in chartulas, viij, quarum sumat duas quotidie.

In dropsy. Each packet contains gr. iij of squills.

Compound Powder of Squills. H. Germ.

Rx. Scillæ, gr. xv;
Iridis florentiæ,
Glycyrrhizæ, ā ā gr. x;
Lactis cum saccharo, ℥ij;
Olei anisi, gutt. iij.

Fiat pulvis in chartulas tres distribuendus, quarum una mane nocteque sumenda.

In the same cases as the above.

Each packet contains gr. iij of squills.

(To be continued).

VICARIOUS LACTATION.

To the Editor of the Original London Medical and Surgical Journal.

SIR—Not having met with a similar case to the following, during nearly twenty years' practice in the metropolis, I cannot but consider it one of exceedingly rare occurrence, and such as you may probably deem worthy of professional record. It is that of a woman who during the latter months of utero-gestation, and at the period of lactation, has the axillary gland under each arm much enlarged, and secreting a profusion of milk, pouring it forth simultaneously, and probably sympathetically, every time she applies her infant to the natural source; the gland, with the accompanying distended integument, forms a tumour of the size and shape of an ordinary sized tea-cup inverted, which yields upon lateral compression a copious discharge of milk, passing through the cuticular pores; by applying the breast-pump, I extracted a considerable quantity of fluid, having the apparent character of milk, separating into serum and curd upon the addition of acetic acid. I should feel much pleasure in submitting the case to your investigation, and will direct the subject of it to call at your residence, if you wish it, at any time you may please to appoint; and remain, Sir,

Your's, respectfully,

JOHN LANGLEY.

36, Tottenham Street, Fitzroy Square.
Feb. 11th, 1835.

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Foreign Medicine.

Blue Fever of Children (*Febris Cærulea*).

THE disease thus named by M. Goëlis is an affection *sui generis* not hitherto described; it is not to be confounded with the *morbus cæruleus* caused by diseased heart. It is only seen in children from four to twelve months old, and most commonly among the lower classes, who, together with the ingestion of coarse farinaceous food, are subject to the mischiefs of damp unwholesome habitations. The disease always comes on by paroxysms, the children becoming suddenly blue, the respiration difficult, the pulse small, hard, and spasmodic. The paroxysm lasts for some time, disappears and returns: but the intervals daily become less, and the paroxysms finally coalesce. The skin is frequently covered with a viscid sweat, and death takes place suddenly. On dissection, the blood vessels are found greatly congested. Apart from the febrile state which accompanies the attacks, the disease presents all the characters of a nervous disorder; and the remedies that have succeeded the best with M. Goëlis are the succinate of ammonia, and other antispasmodics, combined with mucilaginous medicines.

Together with these internal remedies, warm alkaline baths should be used. When

we have succeeded in overcoming the spasm, a purgative of calomel or a mixture of rhubarb and magnesia should be administered.

Children are, besides, subject to a peculiar *chronic sweat*, which differs from the sweating sickness in possessing no febrile characteristics. In these cases the skin becomes bluish, and, as it were, transparent. This state can very well be combated, according to M. Goëlis, by the administration of a slight infusion of bark with milk, and by frictions with oil of sweet almonds repeated several times in the day.—From the Work of M. Goëlis quoted in our last.

Facial Carbuncle—Cauterization.

M. Lisfranc shewed the Academy de Médecine a man who had been affected with carbuncle. The disease had invaded both eye-lids of the right eye, and had already caused the elastic tumefaction of the thoracic parietes, which is generally observed when the disease is somewhat advanced. M. Lisfranc used the actual cautery: he not only cauterized the eschar after having incised it, but also produced a second burn extending at least three inches beyond the dead parts. An inflammatory circle was formed; the gangrenous parts sloughed away, and the ulcer beneath was found to occupy the whole extent of the anterior surface of the eye-lids, the skin of which was entirely destroyed: the ulcer extended an inch above the eye-brow, two inches below the orbit, and an inch and a half towards the temple.

In order to keep the eye-lids in position during the cicatrization of the ulcer, and avoid their eversion, M. Lisfranc applied two pieces of plaster, which, extending from the temple over the forehead and root of the nose, were moulded to the orbit, and left a space between them corresponding to the centre of that cavity. Over these he placed a large lint tampon and compresses, and maintained the whole with the monocle bandage. The wound healed, and no eversion of the eye-lids took place.—*Gaz. Med.*, Feb. 7, 1835.

[In our next we shall give an account of a very interesting operation on the lower jaw, performed by M. Lisfranc].

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Hospital Reports.

ST. GEORGE'S HOSPITAL.

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Rhinoplastic Operation.

At page {26 of our present volume, will be found a part of the report of the progress of the above operation, which, by some mistake of the printer's, was inserted without that of the operation itself, which is as follows:—

A man had for some months been an in-patient of the hospital, labouring under syphilitic caries of the nasal and frontal bones, which had given rise to a large open-

ing into the frontal sinus and upper chamber of the nose. This opening occupied the root of the nose, being, however, situated rather to the right side, so as to encroach somewhat upon the lachrymal apparatus situated at the inner canthus of the eye. The rhinoplastic operation was decided upon as that which alone gave any chance of restoring the organ. Mr. Keate, under whose care the patient was, commenced by refreshing the edges of the fistulous opening with a bistoury, in doing which a little bleeding was occasioned, more particularly from the angular artery. A card-board pattern of the opening was now employed to mark out the flap, which was taken from the forehead over the left eyebrow, in such a manner that its internal and inferior angle was made to correspond with the internal and superior angle of the opening. The flap was next raised and dissected off, in doing which some branches of the supra-orbital artery were divided, which bled somewhat profusely; but Sir B. Brodie, who assisted at the operation, restrained the hæmorrhage by making pressure upon the vessel, until he had an opportunity of entirely commanding it by the application of a ligature. The flap of skin, which was merely connected by a narrow isthmus to the surrounding integuments, was now twisted round and adjusted over the opening, and their respective edges brought into close apposition with each other. These were retained in this situation by stitches of suture, applied at almost every point of the circumference, and amounting to ten or twelve in number. Strips of adhesive plaister were also applied, so as to still more favour adhesion taking place; pressure was also made with pledgets of lint all round, except at the isthmus of connecting skin, which was carefully protected from all pressure. The size of the large gap in the skin over the left eyebrow, from whence the flap had been taken, was considerably diminished by drawing the edges of the skin towards each other by means of long strips of adhesive plaister. The dressings were kept in situ by means of a roller carefully applied, and the patient was then removed to the ward.

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WESTMINSTER HOSPITAL.

Stone in the Bladder of a Female, of immense size—Lithotomy, &c.

(Case of *Mary Kean*—continued from vol. 6, page 540.)

Nov. 22nd, 1834. Not so well as at last report; has been in great pain, and suffered from considerable constitutional irritation. Opium, in the form of 3ss doses of the liquor opii sedativus during the day, and in that of 1 grain of the acetate of morphia in an enema at bed-time, failed in affording relief to the pain. During the last two or

three days diarrhœa has been present, for which she has had the croceous mixture.

24th. Mr. Guthrie, the other day, consulted Mr. White upon the case, and it is agreed to commence dilating the urethra as soon as possible. He prescribed the following mixture for the diarrhœa, which has yielded under its use..

Rx. Vini ferri, ʒvj;

Liquor. opii sedativ., 3j;

Infus. cascariillæ, 3vij., M. ft. mist.

Capt. cochlear. iij, 4tis horis.

26th. Better than at last report, although she continues to complain of pain in the hypogastric region.

Dec. 20th. Considerably better than at last report, both as respects the constitutional and local symptoms. She has commenced the employment of the sponge tent in order to dilate the urethra gradually; it is found necessary to be very cautious in its employment, as any sudden increase in the dilatation, is found to occasion great irritation.

Jan. 4th. She has been prevented from using the sponge tent lately, in consequence of constitutional disturbance.

Jan. 28th. Much the same as at last report. No further progress has been made towards effecting the complete dilatation of the urethra; as fast as a little step is gained, the patient being obliged to omit the use of the sponge on account of its inducing such excessive irritation. She has, however, again commenced its employment.

Feb. 8th. A consultation on the case, between Mr. Guthrie and Mr. White took place yesterday, when Mr. Guthrie found by examination per vaginam, that the calculus was now of immense size, of an irregular, flattened, ovoid shape, having increased materially since the attempted removal of it about nine months ago. It was agreed that the operation should take place to-day; and as the patient refused to allow it to be performed in the theatre, before the pupils, it was done in a private room. Mr. Guthrie was assisted in the operation by Mr. White, Mr. Thomson, Mr. Hancock, and Mr. Charles Guthrie. Mr. Weiss was present, in order to supply any deficiency in the instruments. The patient being placed upon Heurteloup's bed, Mr. Guthrie commenced by enlarging the already dilated urethra, which he did by dividing it for the space of about half an inch in a direction vertically upwards, towards the symphysis pubis. The common two-branched dilator was now introduced, with the view of still further enlarging the passage, and this was repeated several times, until the fore-finger was allowed ready ingress into the bladder. The calculus was in this way readily detected close against the opening of the urethra, and surrounded by the firm embrace of the bladder. A

very strong forceps, with a screw adapted to the handles, had been purposely constructed by Mr. Weiss, with the view of grasping the calculus between the blades and breaking it by the force of the screw. This was now introduced, but it was found quite impracticable to separate the blades of the instrument sufficiently to admit of the stone being grasped, and after several ineffectual attempts, it was found necessary to relinquish them, a little of the outer phosphatic crust of the calculus having been removed by them. It was now suggested that by introducing one blade at a time, passing one above and the other below the calculus, the seizure of it might be effected. The screw was then removed from a pair of strong common lithotomy forceps, the two blades of which were introduced in this way, but without effecting anything beyond breaking a very small piece of the calculus, although several attempts were made. Recourse was now had to the "screw lithotrite," lately introduced in an improved form by Mr. Weiss. The lower branch of this instrument was first introduced, and the curved extremity being got beyond the stone, this was readily drawn forwards by it, and the upper branch being now placed in the groove of the other, and its point protected by a director, was pushed through the urethra, and in this way Mr. Guthrie succeeded in grasping securely the calculus. The force of the screw was now employed, and by this means a considerable portion was broken off the main body of the calculus, which was extracted by the small forceps. From the difficulty which was experienced in the introduction of this instrument, (as may be readily conceived, when it is recollected that it is adapted only for introduction through the urethra in a united form), recurrence was had to various forms of forceps, as well as to those before alluded to. One of these was broken in the bladder, and the piece extracted. As, however, it was found perfectly impossible to effect anything with these, they were finally laid aside and the screw-lithotrite again had recourse to. It is unnecessary further to detail the precise steps of the operation, the peculiar difficulties of which have already been made sufficiently apparent; but it may be briefly stated, that by the repeated application of this instrument, the calculus, though often missed, was several times seized and broken, and the portions afterwards extracted with the smaller forceps. Three or four of the portions thus brought away were of very considerable size, one of them having a diameter of at least an inch and a half, and being of a cuboid form.

Some blood was lost from the urethra during the operation, which occupied about three hours, the further prolongation being considered improper, as the patient was becoming somewhat exhausted. She was therefore removed immediately to a bed in

a separate room. The pulse was 144, small, but not particularly feeble. She was ordered to have one grain of acetate of morphia.

The fragments extracted amounted in weight to four ounces! and it was thought that almost the half of the stone still remained in the bladder. With respect to the nature of the calculus, it was chiefly composed of lithic acid of a rather deep fawn-colour, having a rather beautiful crystalline arrangement of its particles, which also were very distinctly deposited in regular strata. A nucleus of the size of a horse-bean, of a very hard character, and a dark brown colour externally, but greyish within, and which appeared to consist of oxalate of lime, was also extracted. The calculus had also a very delicate cortex of a white colour, and evidently consisting of the phosphates.

9th. (the day after the operation). This morning is better every way than could have been expected. She has had some rest during the night, and is evidently recovering from the state of exhaustion. Mr. Guthrie says that every thing is going on just as well as could be wished.

14th. At the conclusion of a clinical lecture to-day, Mr. Guthrie gave a hasty sketch of the case to the pupils, and informed them that the patient was going on very well, and that he hoped in the course of three weeks to be able to remove the remainder of the calculus. He attributed the so-far successful result to the cautious employment of the various instruments; and so long as this was attended to, he considered that operations might frequently be with propriety protracted beyond the canonical time of an hour.

Necrosis of the Inferior Maxilla—Division of the Hypoglossal Nerve.

(Case of *Samuel Brinnigan* continued).

14th. The wound in the face is going on very favourably; it is filling up with the healthy granulations, and discharges a healthy pus. The surrounding erythema is likewise evidently diminished.

In our last report we alluded to an impediment in the speech, which the patient attributed to the ball's passing through the mouth, but which we then, hastily indeed, and on anatomical grounds, and without having had an opportunity of examining the tongue in relation to this point, referred to an injury of the mouth, or hypoglossal nerve inflicted by the ball in its trajectory across the summit of the neck. To-day, however, we found that this conjecture was fully verified, for Mr. Guthrie drew the particular attention of the pupils to the fact of there being a complete paralysis of the left half of the tongue; the muscles of the right side, retaining their power, draw it, when protruded, round the right angle of

the month, in a very grotesque manner. Neither the sense of taste nor that of touch is in the least affected. We must express our dissent from an opinion which we heard expressed in the ward by no mean authority, that the way to restore the equilibrium of the organ would be to divide the nerve of the opposite side, for as not a single anterior or motor filament of the fifth nerve (we speak from actual dissection) reaches the tongue, such a proceeding would necessarily produce a total paralysis of the organ.

BOOKS.

The Principles of Physiology applied to the Preservation of Health, and to the Improvement of Physical and Mental Education. By Andrew Coomb, M.D., Fellow of the Royal College of Physicians of Edinburgh. Third Edition, revised and enlarged. Edinburgh, 1835. 12mo. MacLachlan and Stewart.

The third edition, in eleven months, of a work entitled to a place in every family and medical library.

The London Anatomist, or a System of Anatomy, Physiology, and Surgery, combined by G. D. Dermott, Lecturer on Anatomy, Physiology, and Surgery. London. 1835. No. I. pp. 94. Price 2s.!

An exceedingly instructive and a very cheap publication. It is arranged in accordance with science, and is a valuable vademecum to the student and practitioner.

CORRESPONDENTS.

W. H. J.—Our correspondent is in error. He surely cannot expect two Courses of Lectures on the same subject, in the same Journal. Reports of Societies are little

more than advertisements of certain individuals. The Clinical Lectures alluded to will be continued.

Eblanensis.—We expected every opposition; but certainly not that our Journal, forwarded regularly for six months, should be withheld from our personal friend. We shall meet our opponents at Philippl.

Dr. Corrigan's Lectures will be published immediately.

A., Senex, &c.—Buffoonery.

J.—The Index and Title page will be published next week. Our correspondents know little of the labour and trouble of index-making: we should advise some one of them to amuse himself by preparing an alphabetical index of any three numbers, and then he will be enabled to judge of the time it takes to prepare one for twenty-six numbers.

A Liverpool Friend.—Many thanks for the communication.

An Hospital Student.—The complaint is just, but neither the governors, public, nor students, can reasonably expect medical officers of hospitals, who give their services gratuitously, to sacrifice their personal interests. If they were remunerated for their services, then, and not until then, ought they to be punctual in their attendance. Surely an hospital or dispensary medical officer cannot be expected to lose a private patient in the upper ranks of society, and injure his family, for nothing.

Crito.—Certainly—the three lectures are as puerile as could be found. We say, "Go on and prosper."

WEEKLY METEOROLOGICAL JOURNAL.

1835.	Moon.	Thermom.			Barometer.		De Luc's Hygrometer		Winds.		Atmospheric Variations.		
Feb.													
12	☉	46	47	37	29.88	30.03	61	60	S.W.	W.N.W.	Cloudy	Fine	Fine
13		39	47	39	30.06	29.93	60	60	W.	W.S.W.	Fine	—	—
14		44	51	44	29.71	29.53	60	62	S.W.	S.W.	Cloudy	Misty	—
15		49	52	42	29.50	29.94	62	57	W.S.W.	W.S.W.	Misty	Fine	—
16		42	47	41	29.24	29.43	57	57	W.	W.S.W.	Cloudy	Rain	Cloudy
17		42	47	41	29.46	29.50	57	57	W.	W.S.W.	—	Fine	—
18		44	47	41	29.23	29.22	57	57	S.	S.W.	—	Cloudy	—

50, High Holborn.

WILLIAM HARRIS and Co.

All communications and books for review are to be addressed (post paid) to Dr. Ryan, 4, Great Queen-street, St. James's Park, Westminster; or to G. Henderson, 2, Old Bailey, Ludgate-hill.

Advertisements should be forwarded before the afternoon of Thursday; all books for review on Wednesday; and all communications on Monday, if intended to appear in the ensuing number.

THE

London Medical and Surgical Journal.

No. 161.

SATURDAY, FEBRUARY 28, 1835.

VOL. VII.

LECTURES

ON

MEDICAL JURISPRUDENCE,

DELIVERED BY PROFESSOR A. T. THOMSON,
F. L. S.,

At the University of London; Session 1834-35.

LECTURE XIX.

Disqualification for Military or Civil Service.

GENTLEMEN—*Hæmorrhages* are feigned, particularly hæmoptysis, by sucking blood from the cheeks and gums; but this imposition is easily detected by the state of the pulse, which in real hæmoptysis is small, irritable, and quick, whilst it remains natural in the feigned disease. In the feigned disease, also, there is no dyspnoea, and the appearance of the sputa confirms the suspicion; and, when the mouth and fauces are examined, the deception is at once discovered. The stethoscope, also, now affords us the means of readily detecting real from feigned pulmonary diseases.

Hæmatemesis is frequently feigned by soldiers and negro slaves. It is effected by swallowing real blood, and afterwards disgorging it by the aid of an emetic. Sauvage mentions the case of a girl who wished to escape from a convent, and for this purpose feigned hæmatemesis. She brought up several pounds of blood in the presence of several physicians, on several successive days. The imposition was suspected; and she at length acknowledged that she had swallowed bullock's blood always before the visit. The absence of the symptoms which always accompany the vomiting of blood in hæmatemesis readily detects this imposition; and the suspicion may be verified by watching the patient, so as to prevent the means of keeping up the simulation from being obtained.

The power, also, of imitating *tympanites* was well exemplified in a case under my own observation.

The extent to which the proofs of feigned diseases might be carried would far exceed the limits of a lecture; I will therefore conclude by noticing that no disease is more easily feigned, or more difficult of detection,

than *insanity*; and we have instances of its being feigned in all ages, both for private and public purposes; but particularly to defeat the purposes of justice. It is but proper to say, that a high authority on this subject denies the facility of simulating insanity: "To sustain," says Dr. Haslam, "the character of a paroxysm of active insanity, would require a continuity of exertion beyond the power of a sane person; the impostors cannot keep up the deception when they suppose themselves alone and unwatched; the assumed malady then disappears, and the imposture is recommenced when they are in the society of others. They are likewise unable to prevent sleep. If they endeavour," continues Dr. Haslam, "the passive forms of this malady, which is an attempt of considerable difficulty, they are deficient in the presiding principle, the ruling delusion, the unfounded aversions, and causeless attachments which characterise insanity—they are unable to mimic the solemn dignity of systematic madness, nor recur to those associations which mark this disorder; and they will want the peculiarity of look which so strongly impresses an experienced observer."

With the highest respect for the authority of one so conversant with the symptoms of insanity as Dr. Haslam, I must nevertheless differ from him as to the possibility of feigning insanity, so as to deceive experienced practitioners in the same line of profession which Dr. Haslam practises. An instance of this has come within my own knowledge. (Here the lecturer related a case which occurred at Glasgow).

The detection of feigned madness, as you may perceive from the story which I have just told you, is frequently a matter of great judicial importance, involving the dearest interests of individuals and families, and not unfrequently the peace of society. But it is the extremes of madness only which can be feigned—furious mania, and idiocy. In the former the impostor generally fails in the watchfulness which always accompanies furious delirium; the very means he adopts to impose on others unveils his knavery, by the exhaustion it

causes, and sleep overpowers him; whereas the real furious maniac will be many days, even weeks without sleep. Idiocy is more easily feigned. "We knew," says one of the writers of the article Feigned Diseases, in the Cyclopaedia of Medicine, "an instance of a young player who was drafted into the army, and acted the part of an idiot so effectually that he procured his discharge. The following may be regarded as the guides most likely to lead you to a correct diagnosis in your examination of a case of supposed feigned insanity: in detailing them it is impossible to avoid anticipating the view of insanity as an object of medical jurisprudence, which is soon to occupy our attention.

1. In feigning madness, pretenders generally outstrip madness; they out-Herod Herod, exhibiting themselves and the disease which they are simulating, in the most violent and disgusting points of view; and, by this excess of colouring, and caricature outline, they are readily detected.

2. Real madmen, in their lucid intervals, are anxious to conceal their state, and if questioned regarding it, reply that they are not mad, nor ever have been so: feigned madmen, in the pretended lucid intervals, never desire to conceal the condition they desire to imitate.

3. The sleeping hours of the feigned madman must be closely watched, for he is unequal to the degree of watchfulness which is a constant attendant on real insanity.

4. The medical practitioner should visit the patient at all hours, but more particularly in the morning, before he rises from bed; for there is a peculiar animal odour exhaled from the bodies of maniacs, which if once smelt, can never be mistaken, and never present but in cases of real insanity.

5. The pulse, also, forms a source of diagnosis: it is quicker in all the grades of madness than in health; but this admits of some fallacy.

6. Emetics scarcely act on the insane: if a common dose, therefore, of tartar emetic produce a full effect, deception may be suspected. If the madness attempted to be feigned, is melancholy madness, a drastic purgative may be administered, as melancholy maniacs are very insensible to the influence of drastic purgatives.

7. If idiocy be the kind of insanity feigned, something may be deduced by comparing their pusillanimity and submissiveness, their memory and conception of ideas, with those of a sane person.

8. In ordinary madness, there is no hesitation and reflection observed in discourse; the ideas succeed each other with the greatest rapidity, and the most incoherent wandering. If punishment be threatened, the real madman scarcely heeds it, being so fully occupied with the phantasms of his imagination, as to be insensible either to

hope or fear: but real punishment has a powerful effect on a madman; the feigned madman dreads the threatening, but again repeats his pretended madness. I cannot avoid noticing to you a very admirable illustration of the effect of punishment in a real madman, by Cervantes, in his preface to *Don Quixotte*. (Here the Lecturer related the story of the madman who carried a stone on his head).

9. The most certain test is the whirling chair, which is placed upon a spindle, so as to revolve on its own axis, and is whirled with the rapidity of a fly-jack, by aid of a wheel and crank; it causes nausea to syncope, so that, as few men can act a part after such discipline, the impostor generally confesses the deceit. But persons not only feign diseases, but actually maim themselves to excite pity. The common law says, "that any person maiming himself, to have a specious pretence for asking charity, or to prevent his being impressed as a sailor, or enlisted as a soldier, may be indicted, and on conviction, fined and imprisoned. (2 East, p. 822).

Such are the modes of detecting feigned diseases, which I have treated under the head of military disqualifications, rather than elsewhere, as they are most generally attempted by soldiers and sailors. Although I believe that officers of even great experience in the tricks of soldiers, have often been deceived by them, yet, you must recollect that it is the business of a surgeon to a regiment, or a physician to the forces, to know thoroughly the symptoms of disease; and that the indulgence which should be readily granted to the officer, cannot be extended to the medical man. In the case of officers feigning illness, many difficulties present themselves: some of the best, and a few of the worst feelings of our nature, come into play, and interfere with the performance of strict impartiality: but one line of duty only should direct you—that dictated by truth and honour.

With regard to disqualifications to serve on juries, little more need be said than to mention the diseases which unfit an individual to sit long in court, and to undergo the fatigue incident to the duty of a jurymen. These are what are mentioned in your syllabus—severe asthma—epilepsy—consumption—aneurism—stone in the bladder—vertiginous affections, and infirmity from age. The propriety of granting certificates of inability to serve must be obvious to every one who is acquainted with the nature of the duty of a jurymen, not only as refers to the fatigue incident to every trial, but also on account of the confinement which may occur after the trial. "By the law of England, a jury, after their evidence given upon the issue, ought to be kept together in some convenient place, without meat or drink, fire or candle, and without speech with any, unless it be the bailiff, and with him only if they

be agreed." (Hargrave's Coke on Littleton, l. 3, c. 5, sect. 366, p. 227 b). The infirmity of age is too little attended to. I had an opportunity of witnessing the fatal effects of a certificate being refused by a medical man, on this account, which obliged the old gentleman to attend as a jurymen; and, from false delicacy, having retained his urine for two hours longer than usual, a disease was brought on which terminated in his death. But this is a rare case; and, in general, practitioners, instead of refusing, are too ready to grant certificates, on the loosest investigation of the case.

When a certificate is required, whether to exempt from military service, from civil service as a jurymen, or as a witness, or to arrest execution in criminal cases, the same honour which should guide an upright and high-minded man in the ordinary transactions of life, should regulate the conduct of the medical practitioner in this case, in which his skill and the correctness of his testimony are to decide. In cases of military service, he must look at every state of disease with the eye of suspicion; must investigate minutely the symptoms under which the applicant for exemption is said to labour; he must inquire into the circumstances of their accession, progress, order of succession, intensity and duration. If this investigation be conducted with skill, and if his examination be frequently repeated, few of the wiles, even of *old* impostors, will escape the eye of experience, and deceptions will rarely fail of being unmasked. But, after all, the task is extremely difficult to execute well; and, although some disgrace must always attach to a practitioner who permits himself to be deceived by a feigned disease, yet it has occasionally happened to the most experienced and cautious; and I cannot agree in the opinion of Dr. Beck—"that nothing can be more disgraceful to a surgeon." In granting certificates to exempt from service on juries, or to appear as

witnesses, the same and even more caution is requisite. You should always object to granting certificates in such cases to individuals who are not your ordinary patients; for the very act of a person requiring a certificate from a stranger to his ordinary habits and health, throws some suspicion upon the request. But when we have an opportunity of knowing the state of the person requiring the certificate, although he be not at the moment labouring under acute disease, yet, if he be liable to attacks which can only be warded off by calm, and freedom from fatigue and anxiety, it is our duty to grant a certificate, and to stand between every effort to enforce duties, which are not indispensable, upon the subjects of such maladies. With regard to certificates to excuse witnesses from appearing in Court, as more freedom is permitted to them in every respect, than to jurymen, less tenderness is requisite towards their ordinary ailments; and unless a witness be actually confined to bed, or labouring under some acute disease, he can hardly be regarded as excusable in absenting himself from Court, in cases the adjudication of which may materially depend on his evidence. The acuteness of counsel generally discover frivolous certificates; and, in a trial which occurred a few years ago, the honour of the profession was not raised by the discovery of a certificate of this kind having, *inadvertently*, been given upon very slight grounds by a respectable practitioner in the neighbourhood of the metropolis. In every case, your certificate should be granted only upon such grounds as you can always be prepared to defend, should the statements in it be called in question.

With respect to criminal cases, it is impossible to suggest specific rules applicable to every case. Humanity, where it does not oppose justice, or infringe upon truth, ought to be our guide.

LECTURES

ON THE

INSTITUTIONS OF MEDICINE,

DELIVERED BY JOHN FLETCHER, M.D., F.R.C.S.E., AT THE ARGYLE SQUARE SCHOOL OF MEDICINE, EDINBURGH; SESSION 1834-35.

LECTURE XII.

Decomposition of Organized Matters—Classification of Functions.

DURING all the above, and other similar decompositions of organic matters, myriads of minute plants, called mould, &c., and of animalcules, according to the nature of the matters so decomposed, usually manifest themselves. This phenomenon was, till lately, in general attributed to the development, in the matters undergoing decomposition, of minute germs, which were presumed to be universally disseminated, but to become developed only when they met with a congenial soil, such as that afforded by the products of decomposition.

tion (a). Of late, however, this hypothesis has been in a great measure superseded by another, which ascribes these plants and animalcules to the retention, by a portion of the extractive, sodo-albumen, gelatin, and so forth—the globules of which, it must be remembered, are regarded as organic elements or molecules—of their supposed aptitude for life, so that certain globules of these matters take on, more or fewer of them together, the form of distinct organized beings (b). It has been already mentioned that the highest tribes of plants and animals have been supposed to differ from the lowest, as well as the perfect plant and animal of every tribe from its earliest germ, only in the circumstance of more organic molecules—the primary as well as continual source of which is the aliment—entering into their composition; and it is hence easy to conceive that as a progressive amalgamation, as it were, of these molecules might, at the creation, form in succession each higher species of organized beings from those below it, as well as, during the development of each individual in its generation, carry it successively through all the inferior types till it finished with its own; so a separation of the same molecules might, either as passed off with the excretions, or on the decomposition of each individual of a higher species, again give rise to innumerable individuals of a lower grade, the same being ready subsequently to contribute, either by receiving into themselves new organic molecules or furnishing the same to other organized beings, to the formation again of any mode of organized existence superior to themselves (c). And that such is the origin of the mould and animalcules in question has been inferred from the globules of such organic matters having been observed to be from the first in constant agitation; and from such moulds and animalcules having been detected in infusions of organic substances, during their decomposition, even when these substances have been previously exposed to a heat sufficient, it is presumed, to destroy all germs, when only distilled water has been used, and when the infusion has been kept constantly in vacuo (d). But that the doctrine of the perpetual transmigration of any supposed organic molecules, whether well or ill-founded, cannot apply to the globules of extractive, sodo-albumen, gelatin, &c., which are pretty certainly not identical with them, and have not the aptitude for life alluded to, is obvious; and it is equally so that it cannot be true of the really organic molecules, if we believe that it is into extractive, sodo-albumen, and so forth, that these molecules, or the organized tissues composed of them, are, on the cessation of their vitality, converted. It is a fair objection likewise to the hypothesis in question, or rather to an immediate corollary from it, namely, that the whole of organized nature consists at all times, and has at all times consisted of the same definite number of organic molecules (e)—that a very considerable pro-

(a) Harvey—the author of the celebrated axiom, “*Omnia ab ovo*”—Leeuwenhoek, Redi, Swammerdam, Spallanzani, Bonnet, Linnæus, Ehrenberg, &c.

(b) Turberville, Needham, Buffon, Lamarck, G. R. Treviranus, Tiedemann, H. M. Edwards, Dutrochet, Dumas and Prevost, &c. This doctrine, although allied to the ancient hypothesis of “*Equivocal Generation*,” is not identical with it; since, while by the latter certain matters were supposed to be vivified *de novo* by the heat evolved during putrefaction, and thus to assume the form of distinct animalcules, by the latter these matters are believed to be possessed of innate vitality, and to acquire newly each an independent existence by separation.

(c) *Haud igitur penitus pereunt quæquomque videntur,*

*Quando aliud ex alio reficit Natura;
nec ullam*

Rem gigni patitur, nisi morte adjecta aliena.

Well might the ancients say, if this be true, Death is the mother of life—*Nascimur ad mortem, morimur ad vitam*—since what is called the death of a tree or a man is nothing more than the separation of a vast bag of mould or animalcules, which, as Dr. Prichard expresses it, “had been tied up together, and obliged to subsist within one

bark or skin,” into fragments, which may either coalesce together into some higher tribes, indiscriminately, of plants or animals, “*De même,*” says Edwards, “*que les sels affectent en cristallisant,*” or go to form a future tree of the same kind, or a future man, by entering with their food. “Here’s fine revolution, an we had the trick to see it.” It had been long known that “we fat all creatures else to fat us, and we fat ourselves for maggots”—it had been long known that “a man may fish with a worm that hath ate of a king; and eat of the fish that hath fed of that worm:”—but it is only lately that it has been suspected that the said maggots and the said worms were aborigine part and parcel of this lord of the creation, as he was a compound of millions of their fraternity; and that as when a man has been devoured by maggots, it is only that his individuality is multiplied, so every time he takes a meal, it is only that the individuality of myriads of other organized beings is destroyed. “*Il n’y a point,*” says Cabanis, “*la mort pour la nature.*”

(d) G. R. Treviranus, &c.

(e) It would be a curious speculation to inquire, upon the principles of the advocates of this doctrine, in what way the determinate complement of the organic molecules in our planet has been, at any given time,

portion, at least, of extractive, sodo-albumen, &c., is certainly resolved into merely mineral substances in every instance of the decomposition of organic matters—else whence the carbonic acid, carburetted hydrogen, and ammonia which they evolve? and, as these substances must—unless the organic kingdoms of nature are, instead of increasing, gradually failing from off the face of the earth—be continually renewed, in the same proportion, by combinations of mineral substances, there seems to be no good reason why the whole of such substances should not be so resolved and so renewed. It would be premature in this place to expatiate on the obscure subject of generation, involving as it does the important question of the nature of life, which is so soon to occupy our attention; but it may be allowable to state here, that nothing hitherto adduced, in support of the hypothesis now under consideration, seems to be at all less easily explicable on the old doctrine of universally diffused germs, than on the new one of perpetually transmigrating organic molecules. With respect to the constant agitation of globules said to be observed in the infusions of organic matters during their spontaneous decomposition, a similar phenomenon has been noticed during the mechanical separation of particles of sulphur, flint, glass, manganese, and other mineral substances, in which the existence of organic molecules was out of the question (*a*); and with respect to the development, in the former, of mould and animalcules, when they have been exposed to heat, immersed in distilled water, and kept in vacuo, it is easy to conceive that minute germs may have been as competent to resist heat without destruction as organic molecules, and that such minute germs may as well have been contained from the first in and about the matters undergoing decomposition, as that they could find access to them only with the water or the atmosphere: nor will the countless myriads of new beings frequently so developed appear to be any objection to this explanation, when we reflect on the incalculable rapidity with which, once evolved, they perpetuate their species (*b*). Upon the whole, the difficulty of accounting, upon commonly received principles, for the phenomena in question, does not appear to be so great, as to warrant our adopting so overwhelming an hypothesis, in order to explain it.

All that has preceded appertains only to the differences in their structure between inorganic matters and organized beings, involving the consideration of their form, aggregation, substance, and composition: the next subject to be treated of is the differences in their actions. The following, then, are the chief characteristic actions respectively.

Of Inorganic Matters.

Those only by which their particles are held together, and by which they retain the same composition, substance, aggregation, and form, unalterably for ever, unless these are changed by some external agent.

Of Organized Beings.

1. Those by which they continually secrete and give off from their fluids, into the medium by which they are surrounded, certain gaseous substances, while they absorb from it others, for the purpose of effecting some necessary changes in the composition of these fluids. (*Respiration*).
2. Those by which they continually propel these fluids through the solid parts of their structure, for the purposes, on the one hand, of forming and depositing new solids and fluids, and, on the other, of breaking down and carrying away old ones, such of the latter as are useless being thrown entirely out of the system. (*Circulation, Nutrition, Secretion, Absorption, &c.*)
3. Those by which they at intervals receive from without certain solid and liquid substances, which they assimilate to the nature of the fluids so employed, for the purpose of renewing them in proportion as they become wasted. (*Digestion*).
4. Those by which they at intervals form and throw off certain organized parts, for the purpose of continuing their species. (*Generation*).

disposed of—that is to say, what proportion has been appropriated, first, respectively to the vegetable and animal kingdoms, and afterwards to each of the 56,000 species of plants, and 51,700 species of animals. It would appear that some of them must be very considerably minus what they were when the whole human race consisted of only a single pair, now that it numbers, at the lowest estimate, five hundred millions of individuals!

(*a*) Fray, *Sur l'Origine des Corps Org. et Inorg.* 1817. R. Brown. Brewster, Edinb. Journ. of Science, 1829.

(*b*) It has been computed by Linnæus that three flesh-flies and their immediate progeny will devour the carcass of a horse in less time than a lion could have done it, the female not unfrequently giving birth to 20,000 larvæ at a time, and a few days being sufficient for the production of a third generation.

Of Inorganic Matters.

[The duration of these matters, therefore, may be said to depend on their being allowed to remain unchanged—in other words, on their apparent repose (a).]

Of Organized Beings.

[All these actions are, under ordinary circumstances (b), essential, first to the continued existence of organized beings, as individuals, and secondly to their perpetuation, as species; consequently the duration of these beings may be said in general to depend on their being continually decomposed and recombined—in other words, on the obvious actions which are constantly going on within them (c).]

In addition to these actions of organized beings in general, are some others, commonly presumed to be proper to animals, and certainly requiring other conditions besides those which alone were necessary to the foregoing; such as—

5. Those by which they become conscious of impressions made upon them (*Sensation*).

6. Those by which, in virtue of this consciousness, they reason and will (*Thought*).

7. Those by which, in virtue of this will, they effect various movements (d) (*Voluntary motion*).

(a) The repose is here merely *apparent*, and the term is used, therefore, as opposed only to *obvious* action, since it is by a constant, insensible action—namely, by attraction and repulsion in one or other of their modifications—that repose itself is maintained. Even the *vis inertiae*, in every thing but the ultimate atom of matter, depends upon their exercise.

(b) The expression, “under ordinary circumstances,” is added for the purpose of meeting those extraordinary cases—some of which have been already alluded to—in which organism survives, for a longer or shorter period, the display of any obvious action whatever.

(c) Organized beings are accordingly compared by Cuvier—and well compared, notwithstanding the protest of Dr. Barclay—“à des espèces de foyers, dans lesquels les substances mortes sont portées successivement pour s’y combiner entre elles de diverses manières, et pour s’en échapper un jour, afin de reutrer sous les lois de la matière morte;” *Leçons d’Anat. Comp.*, 1799, tom. i, p. 5: and again, “la vie” says he, “est un mouvement de tourbillon, plus ou moins rapide, plus ou moins compliqué.” p. 6.

(d) It is usual to enumerate, among the characteristic actions of organized beings, those by which they evolve heat; and if this be done, we should specify also others by which many such beings evolve likewise light and electricity. But none of these phenomena are, in fact, proper vital actions, but the necessary physical results of some of those actions which have been above mentioned; and indeed the evolution of cold—if the expression may be allowed—is often not less remarkable as the result of such actions than that of heat, the balance on either side depending, in any given instance, on the comparative energy of those vital actions from which heat and cold respectively result. If it be admitted that the carbonic acid, which appears in respira-

tion, is not produced by the immediate combination of the carbon of the venous blood, in the lungs, and the oxygen of the air, as we are taught by the chemists, but secreted from the venous blood in its passage through the lungs, and that the oxygen which disappears is absorbed into the nascent arterial blood in the same passage—as has been elsewhere assumed, and as may be proved to be the case by all but conclusive evidence—if it be admitted—as it universally is—that, while there is very little difference in the density of venous and arterial blood, the density of carbonic acid considerably exceeds that of oxygen; and lastly, if it be admitted that there is little or no difference in the bulk of the secreted and absorbed gases—as has been abundantly established—the extrication of animal heat involves no new vital action, but is a necessary physical result of others; and the theory of this process—so long regarded as one of the most inexplicable problems—becomes one of the most simple and satisfactory in all physiology. The conversion of a liquid into a gas *must*, by rarefaction, produce cold, whilst the opposite conversion of a gas into a liquid, *must* by condensation, produce heat; and, the density of the two liquids being nearly the same, had the density of the two gases been so too—keeping in mind that their bulk is equal—the one process would have neutralized the other, and neither sensible cold nor sensible heat would have resulted. But the density of the two gases is not equal: the transition, therefore, of the liquid into the denser gas, produces less cold than that of the rarer gas into the liquid produces heat, and what is called organic heat is thus merely the result of the absorption of oxygen into arterial blood, *minus* that of the secretion for venous blood of carbonic acid; and when we reflect that in the human being the temperature of not less perhaps than ten pounds of arterial blood is sensibly raised by this means about 2 deg. every minute, as first insisted on by Dr. Holland,

These, then, are the chief distinguishing features in the actions of organized beings, and it is in the investigation of these that the science of **PHYSIOLOGY** properly consists. The several series of actions above enumerated, are their functions, the term function differing from the term action, as applied to such beings, only as being more comprehensive, and as having a reference always to some general end, the function of respiration, for example, including the actions of many different organs, all which, however, co-operate in effecting some necessary changes in the composition of the fluids (*a*). In this view of the matter, then, a function may be defined to be the action, not of an organ, but of an *apparatus* destined to some specific purpose in the general economy of an organized being; and it is only in this view of the matter that the functions of such beings are susceptible of enumeration or classification (*b*). Of the several series of actions, however, or functions, specified above, the four first are those by which, principally, organized beings are distinguished from inorganic matter, while the three last, on the other hand, serve chiefly to distinguish some kinds of organized beings from others.

of Sheffield, (Experimental Inquiry, &c., 1829), and that he has—not continually to extricate, *de novo*, as is idly imagined, a sum of caloric sufficient to constitute the whole difference between the temperature of his body and that of the atmosphere—but merely to keep up what is in any given time passing from him, we shall not require any aid from the latent heat doctrine—according to which, to say nothing of its numerous other stumbling-blocks, the venous blood ought to be hotter than the arterial—nor from any other, easily and satisfactorily to explain the whole process. Perhaps, indeed, the theory above proposed may be, as Magendie says, “trouvée trop simple;” but in the mean time, were the present the place for entering in detail into the subject, it would be easy to shew that, simple as it is, while it is supported by every fact which was at one time supposed so strongly to corroborate that of Black and Crawford, it is amenable to none of the objections which must be fatal to the latter, and at the same time explains many circumstances which neither this nor any other theory has approached. Calorification, then, is no more a vital action, *per se*, than frigorification, which has long by general consent been allowed to be the natural and necessary result of transpiration, the inconsistency, in the mean time, of attributing heat to one gaseous exhalation, and cold to another, having been overlooked. The secretion of carbonic acid is and must be directly a source of cold, but, the absorption of oxygen always corresponding with it, it becomes thus indirectly a source of heat; whereas, the secretion of halitus—so much rarer as it is, to begin with, than carbonic acid—is a source of unqualified cold, there being in this instance no counteracting power in operation.

(*a*) It is very important to keep constantly in mind the physiological distinctions between a property, faculty, quality, or capability, a power, stimulus or agent, and action or function; the first, like irritability, sensibility, and so forth, signifying only a susceptibility of excitement, the se-

cond, like caloric, light, sympathy, &c., only a means by which this susceptibility may be called into action, while the last, like irritation and sensation, signifies the phenomena resulting from the two in co-operation. It would have appeared almost superfluous to notice these distinctions, had they not been so frequently lost sight of, not only by the *οἱ πολλοί*, but even by authors of merited celebrity, Adelon, for instance, speaking continually of the *function* of sensibility, Barclay of the *property* of sympathy, and Bostock of the *power* of sensation.

(*b*) The enumeration of the functions has been from the most ancient periods almost the same as at present, the co-operation of the actions of several organs, if not the specific end in view, having from the first furnished certain broad principles upon which each might be distinguished from the rest; but the classification of them has been very various. By Aristotle, the first to attempt any regular arrangement of the functions of animals, they were classed under the three heads of Vital, Natural, and Animal; the two former including those which were common to plants and animals—the first, however, not allowing of interruption for an instant without danger of death, while the second allowed of a considerable interruption with impunity—and the latter including those which were regarded as proper to animals; and this classification, adopted as it was by Galen, became that of most physiologists almost down to our own times, nor have indeed very many years elapsed since the addition which the latter made to this system of classification, that over each of the heads of functions which it includes certain specific *Πνεύματα* or spirits, called respectively Vital, Natural, and Animal, presided, was abolished. By Paracelsus, one of the first original thinkers in after times, the vital and natural functions of Galen were spoken of as constituting one life—that which acted within an animal, and the animal functions as constituting another—that which acted upon surrounding bodies; and this was the basis of the arrangement of the functions proposed by Harvey under the

CLINICAL LECTURES

AT

JERVIS-STREET HOSPITAL, DUBLIN,

Delivered Session 1834.

BY DR. CORRIGAN.

LECTURE I.

Philosophy and Practice of Medicine—Diarrhœa.

GENTLEMEN—There are not, perhaps, two things often more opposite in appearance than the philosophy and the practice of our profession; not that they are essentially in contradiction to one another, but they are rendered so by injudicious attempts at simplifying.—Naturally they illustrate one another; and he will ever be the best physician who, from reflection and observation, combines them, the philosophy or principles of the science being first in his mind, and the practice or

application of remedies second, “but second without being inferior.” Artificially they are too often separated, and he is the worst physician who attaches himself exclusively to the one, or devotes his whole observation to the other; in the one case he becomes a visionary theorist, in the other, an ignorant and guess-working quack.

These observations have naturally arisen from, and an apt illustration of their truth is afforded by the disease which is the subject of our present lecture—diarrhœa; for, while the philosophy of medicine would prove to us that there is no such disease,—so say our Gallic “*sçavans*,” “*La diarrhée n'est qu'un symptôme et jamais une maladie*”—stubborn practice tells us there is. Philosophy may assure us that a patient who has died of diarrhœa ought not to have died, because diarrhœa was no disease, but only a symptom; but observation shews us that patient was sinking exactly in propor-

names of Vegetative and Sensitive—the former of which were supposed to be actuated by the $\psi\upsilon\chi\eta\ \theta\epsilon\sigma\tau\iota\kappa\eta$, and the latter by $\psi\omega\chi\eta\ \alpha\iota\sigma\theta\eta\tau\iota\kappa\eta$ of the ancients, or, as Harvey himself called them, the *anima vegetativa* and the *anima sensitiva*. Almost precisely similar to this, except in words, is the popular twofold arrangement of the functions followed by Bichat, his organic functions almost entirely corresponding to the vegetative, and his animal to the sensitive of Harvey; but he differed essentially from the latter in denying that they were the results of the operation of any $\psi\upsilon\chi\eta$ or *anima*, contenting himself with representing one general department of the nervous system—the ganglionic—as subservient to the former of these heads of functions, and the other—

the cerebro-spinal—to the latter. In quite recent times, the functions have been commonly classified according rather to the general purposes to which they minister in the animal economy than to any other condition; and upon these principles—which have been followed above—three heads of functions have been generally admitted, the Nutritive, or those which are subservient to maintaining the well-being of the individual, the Sexual, Generative or Reproductive, or those which serve to perpetuate the species, and the Relative, or those by which an intercourse or relation is kept up with the external world. Admitting, then, on all hands the same number of functions, the following is their classification by the above-mentioned authors:—

	ARISTOTLE and GALEN.	HARVEY, BICHAT.	More recent Authors.
Respiration	Vital.	Vegetative or Or- ganic.	Nutritive.
Circulation			
Nutrition and Secre- tion	Natural.		
Absorption			
Digestion			
Generation	Animal.	Sensitive or Animal.	Sexual, Generative or Respirative.
Sensation			Relative.
Thought			
Voluntary Motion			

It seems superfluous to notice certain other classifications of the functions proposed by Vicq. d'Azyr, Dumas, Buisson, Richerand, Cuvier, and others, in the attempt to attain absolute precision on a subject on which, from its very nature, absolute precision is not attainable, and on which, therefore, any great solicitude about it is vain and frivolous. It is enough that any ar-

range inculcates useful associations, and is conducive to perspicuity, to make it a good one; and that is the best, however logically defective, which conduces most to these ends. “Divisions,” says Lord Bacon, “only give us the husks and outer parts of a science, while they allow the juice and kernel to escape in the splitting.”

tion to the continuance of that diarrhoea, dying of it when not checked, or suddenly restored to health on the stoppage of the flux; and practice fortunately at the same time furnishes us with the means of cure.

There are several species of diarrhoea; but we must of course (not to ramble from the legitimate range of a clinical lecture) confine ourselves to the form immediately before us. I shall first notice the two cases the subject of the present lecture.

1st Case.—J. Walsh, *ætat* 36, a servant, admitted labouring under diarrhoea to the number of twelve or thirteen stools a-day; the stools are bilious and thin, but otherwise healthy-looking. There is general soreness, although trifling, over the abdomen; his appetite is very bad; there is nausea every morning, and sometimes vomiting. He has also troublesome fits of coughing, with muco-purulent expectoration; skin is hot and dry, and covered extensively with prurigo, which is extremely annoying; tongue dry and parched; pulse 86, weak; no pain of chest; no dullness on percussion, or any stethoscopic indication of phthisis. About three months ago he caught catarrh, which was succeeded by swelling of the abdomen and flatulence of the stomach, and for a fortnight the purging has been present to the extent described.

2nd Case.—Val. Gorman, *ætat* 48, a carpenter, of temperate habits, admitted the same day as Walsh. He complained of a general soreness over the abdomen, with frequent calls to stool (about fifteen times in twenty-four hours), followed by dejections of yellow, bilious, feculent, matter, without any pain. There is pain on pressure in the right hypochondrium, the epigastric region, and along the ascending and transverse colon; pains shooting up the thorax and out at the back, and wandering pains of the extremities. There is no headache, no tenesmus; pulse 96; skin natural; much thirst; tongue dry; appetite impaired; great emaciation. He states that the diarrhoea commenced about six weeks back, and that he first felt soreness of the abdomen a fortnight since.

Now, having read the cases, the first question that naturally suggests itself to an inquiring mind, and which I would always recommend you to ask yourselves mentally at the bed-side in every case, is this: If the patient now before us were to die at the present moment, what are the diseased changes which would present themselves on a *post mortem* examination, or in more technical and shorter language, what is the pathology of the disease? If you make it a rule never to prescribe for a patient without mentally asking that question, and diligently seeking to arrive at the answer, believe me that simple rule will bring you to a clearness of diagnosis, and will give

you a steadiness in practice, which you never can otherwise acquire. In the present instance, let us endeavour to answer such a question in respect to the two cases now before us.

A patient, James Brady, died in this hospital of the same disease, diarrhoea, four months ago. His case in the commencement differed in no respect from the two cases above given, but that when admitted, from the duration of the attack, and the extreme emaciation and debility under which he laboured, the time had past by for expecting any benefit from medicine. He laboured under the same kind of diarrhoea; the stools yellow, bilious, feculent, and fluid; no tenesmus, no pain—pulse regular. The emaciation and debility were extreme at the time of his death, which occurred seven months after the commencement of his attack. I will now read from the note-book the appearances on dissection. The stomach, small intestines, and colon, in a state of cord-like contraction. The stomach internally healthy: the small intestines looking very thin: portions of the mucous membrane congested and softened: the submucous tissue healthy: no ulceration in the ileum, which was congested at its lower extremity. The mucous membrane of the colon and rectum, congested through a considerable portion of its extent, and studded, particularly in the sigmoid flexure of the colon, with very minute circular pin-sized follicular ulcers, with pale yellow bases. The contents of the intestines very small in quantity, fluid, and similar to the evacuations during life. Gall bladder full of healthy bile, &c. Thus we have information as to the nature of the cases now before us, from the very best source, namely, the examination of a similar case which terminated fatally; and in every instance, where possible, I shall follow this plan of giving you information as to the nature of cases under treatment, by presenting to you the preparations taken from similar cases ending in death, selected either from our own records or obtained from trustworthy sources. The preparation now before you is the sigmoid flexure of the colon, contracted and studded with the very minute ulcers I have just described: and I may just digress for a moment to draw your attention to this, that the intestines, in Brady's case, were found *firmly contracted*.

I draw your attention to this, because such a contracted state of the intestinal canal in *post mortem* examinations of peritonitis or ileus, is called spasm, and is supposed to be the cause of the obstinate constipation which accompanies these diseases: and from this too generally received explanation, is deduced a line of treatment not only unsuccessful, but, I believe, often fatal. The supposition of the contraction of the canal being spasm, or being the cause of the constipation, has been combated, and

successfully, I think, by Dr. Abercrombie : and he is strongly borne out by the dissection of Brady's case, for, not only without constipation, but with frequent stools up to the last moment of life, there was found, on examination after death, firm and cord-like contraction of the intestines. To return, however, to our immediate subject, we learn from the examination of the intestinal canal in Brady's case, as similar as it is possible for one case to be to another, to the cases which are the subject of the present observations, that there may be diarrhoea to such an extent as to destroy life by emaciation and debility, and yet the organic alterations of structure may be very trifling; for the visible alterations of tissue, the congestions, softening, and trifling ulcerations of the mucous tissue, are very much below what we often find after death, in cases where there had not been similar diarrhoea; and indeed in Brady's case it is far more probable that they were the effect of the long-continued diarrhoea, than that the congestion and very minute ulcerations should have preceded the diarrhoea as a cause, and yet at the end of seven months have advanced no further than the degree at which we found them. We must then consider the diarrhoea in the case of Brady and in the two cases now under consideration, as very nearly a purely functional affection arising from a too great irritability either of the mucous membrane or of the muscular tissue, or of both, that morbid irritability not permitting the intestinal contents to remain in the canal, but in fact placing the patient for months in the state of a person under the continued influence of saline or hydragogue purgatives. This continued irritation is very likely to cause structural disease, such as found in Brady's case, and it also sometimes entails disease of other organs.

There was found in Brady's case a change of texture in the lungs, which seems to be an alteration of those organs, attendant on all diseases where there had been long continued debility, exhaustion, and emaciation. It is found in patients who have died of diabetes, of dropsy, of diarrhoea, of chronic disease of the liver. A portion of one or both lungs, generally the upper lobe, is found of a much darker colour than natural, not the colour of congestion, but as if the natural dark colouring matter were in great abundance; the moderate sized bronchial tubes are permeable, the smaller all closed; the lung not crepitating, and most generally with tubercular deposition in varying quantity. This change appears to be the consequence of there not being sufficient exercise for the whole organ, from the great diminution of the mass of blood during a long wasting illness, and the portions not required as it were any longer to carry on their functions, then undergoing this peculiar degeneration. In diarrhoea, the mucous membrane of the lungs very frequently

sympathizes with that of the intestines, and then, in conjunction with the affection of the intestinal canal there is catarrh, with copious muco-purulent expectoration, as in Walsh's case. This abundant purulent expectoration, the fits of coughing which belong to catarrh, the diarrhoea, and the wasting, which is often extreme, makes such a case of diarrhoea bear a very strong similitude to phthisis, causing a great anxiety in the minds of patients and friends. We are, however, generally able to diagnosticate with certainty. The history of the case tells us that the diarrhoea was first in order; in phthisis it never is. The most careful examination by percussion and auscultation discovers nothing morbid in the lungs, and there are, in addition, two other sources of diagnosis on which I would place even more reliance; these are the pulse and skin. The hectic of phthisis is wanting in diarrhoea, and the pulse, even in the worst and longest continued diarrhoea, unless from some temporary exciting cause, is very little above the natural standard. In most cases in private practice, where the patient can avoid cold, and any exciting cause, the pulse remains perfectly regular. Another close sympathy of the portion of the intestinal canal engaged in diarrhoea is with the œsophagus and stomach, so that no sooner is food received into the stomach than the sympathetic irritation (though the intestines had been up to that moment quiet) is felt in the large intestines, and the patient is suddenly obliged to leave a meal. This diarrhoea taking place during meals is particularly observed in children, who have not yet acquired or do not exercise the power of controlling the action of the rectum and sphincters; the sudden action of this sympathetic irritation is properly expressed by the phrase that the drink which the child takes "runs through." The sympathy which is thus observed to exist between the opposite extremities of the intestinal canal is in accordance with what we observe elsewhere of sympathy, for example, between the neck of the bladder and the extremity of the urethra in the glans penis. Sometimes the sympathy is carried farther, and I have seen patients who, while suffering under diarrhoea, accompanied with soreness (a very frequent symptom) along the course of the colon, feel a similar soreness in some part of the œsophagus, at one time higher at another lower, aggravated when the diarrhoea was severe, diminishing with the lessening of the diarrhoea, and finally disappearing altogether with its cessation. This sympathy of the œsophagus deserves more attention than is often paid to it. I have seen a case of spasm of œsophagus which lasted for years. It came on at meals, and often arrested the morsel so suddenly as to produce dread of instant suffocation. From its long continuance, it was at length supposed to arise from organic structure, and applications of various kinds were made,

and made in vain, to the neck. The patient, a lady, suffered all this time under most obstinate constipation; the rectum was kept in a state of constant spasm by the presence of a cluster of mulberry tumours within it, and which protruded after every stool, causing great suffering. These I at length prevailed upon her to allow me to remove by brushing them well with concentrated nitric acid. They sloughed away, and the constipation and the spasm of the œsophagus disappeared together. In the instance of soreness of the œsophagus there was also a tender and excoriated state of the vagina, and for some time after the diarrhœa had been cured, with each return of the menses there was felt, although in a diminished degree, the original sensation in the œsophagus. I have now mentioned most of the remarkable symptoms that occur to me as accompanying that form of diarrhœa now before us. You will observe that it has no relation to dysentery; there is no mucus, no sanguinolent discharge; no scybala, no tenesmus; it is not the form of diarrhœa mentioned by Dr. Elliston as cured by sulphate of copper, in which the stools are pasty and white, generally found in connexion with chronic disease of liver. In the form of diarrhœa now before us, the functions of the liver are healthily performed, the liver is sound, and the discharges are quite healthy in colour and appearance, only more fluid than they ought to be, resembling those procured from the intestines of a healthy person by saline purgatives, or more nearly, perhaps, the fluid fecal matter which we so frequently find in the extremity of the ileum in our *post mortem* examinations of healthy intestines, and it is highly probable that it is this very fluid fecal matter which constitutes the loose and frequent stools of the form of diarrhœa now before us, passed too rapidly on, in consequence of the morbidly increased excitability of the colon. Mercury, which is a remedy so often employed whenever the practitioner is in doubt from difficulty in the case, or from ignorance on his own part, is positively injurious in the disease now before us. I have seen it do mischief; I never saw it effect good. The medicine which I have used with such benefit in Walsh's and Gorman's case, and on which I have indeed very great reliance, is logwood in the form of decoction, a wine-glassful three times a day. The case which first strongly impressed upon me its good effects was one in private practice, where the disease had lasted with very little alleviation for nearly two years. The patient, a lady, had in succession run through chalk mixtures without end, opiates, all the astringents in the pharmacopœia, both by mouth and by enema, and had changed scene and air, and all in vain.

She had almost given up all hopes of relief, and the emaciation was proceeding "*pari passu*" with the diarrhœa when I put her on the decoction of logwood. The good

effects were apparent within less than two days from her commencing this remedy, and in less than a fortnight she was completely recovered. In that case there was great emaciation, cough, heat, and soreness in the œsophagus, and aphthous ulceration of the mouth. A case very similar in its symptoms is related by Dr. Abercrombie in his work on diseases of the stomach and intestinal canal, and it was from the perusal of his case, and of the good effects of logwood in it, that I was led to employ it in the case I have briefly narrated. I am sure that logwood has some specific effect on the intestines, or on the vessels of the mucous membranes. It is not at all so strong an astringent as many of those remedies which failed in cases where it has succeeded. Its decoction does not produce a precipitate with gelatine, and probably its specific effect is due to some other principle besides the small quantity of tannin it contains—perhaps to the hematine. I am at present trying the effects of hematine; as yet I can say nothing as to its value. Walsh was perfectly cured of the diarrhœa in 14 days from the date of the commencement of his using the decoction. Gorman was discharged cured in 20 days, and would have been sent out sooner, but that on the ninth day after his admission we were obliged to discontinue the logwood, from his showing some symptoms of general fever, which, however, soon subsided under the exhibition of the common acetate of ammonia mixture. In both Walsh and Gorman's case, about ten drops of aqua kali caustici were given occasionally, with each dose of the decoct. hæmatoxyl, on account of some acidity of the stomach. Walsh laboured under very extensive and aggravated prurigo, which was rapidly removed by a lotion of hydrarg. oxym. 3ij, aqua puræ 3xvi, acid. hydrocyan. 3ij.

It may be well perhaps here to observe, that there is frequently a symptom accompanying long continued diarrhœa, which, if inclined, from the perusal of French writers, to pay too much attention to, enteric irritation might unnecessarily prevent you from exhibiting logwood, that is, a soreness very frequently felt extending from the right iliac region across the epigastrium, and then downwards on the left side. This soreness complained of by the patient might perhaps induce you to unnecessarily apply leeches, &c. to subdue it. It is, however, scarcely increased on pressure, is of that species which the patient describes as internal soreness, has its seat I believe in the colon, and is owing merely to the very frequent action of this intestine, similar in kind to the soreness left after the operation of a smart purgative. It disappears with the cessation of the diarrhœa.

In cases of diarrhœa, attention to diet is of the greatest importance. If the patient mingle together in his intestines a variety of articles of food, our medical treatment

will be of very little use. Whatever diet is found to answer best should be continued, with as little mixture as possible. If farinaceous diet, that should be adhered to as strictly as possible; if animal food be allowed, the patient should limit himself to one kind. The intestine becomes thus accustomed to the nutriment received, and is much less irritated than when successive impressions are made upon it by varying articles of diet. This rule of confining the patient as far as practicable to one species of nutriment, is applicable not only to solid food, but is even, in the administration of drinks, a means of no inconsiderable power in controlling the troublesome diarrhoea of some fevers, and the frequent evacuations which form sometimes so troublesome an accompaniment of enteric irritation in children. There are other means besides the exhibition of the decoction of logwood and the attention to diet, which are useful in the treatment of diarrhoea. Flannel should invariably be worn next the skin, and very large opiate plaister over the abdomen, whether it act by warmth or by absorption, is frequently of use. A small quantity of Dover's powder, 3 or 4 gr. at bed-time, although of itself totally inefficacious, becomes an useful adjuvant, and particularly where it produces, as it frequently does, an eruption of urticaria. The success which has attended the exhibition of logwood in the cases I have described induced me to try it in other diseases. In a case of hæmorrhagia of the passive kind, which occurred in a patient ætat. 22, and had lasted for two years with little intermission, partially checked by rest and sea-bathing, with iron, but never cured, and which had resisted lead and all the usual remedies, the extract of logwood given three times a day with mist. ferri aromatica has been perfectly successful. I intended to proceed with the consideration to day of the case of "Button scurvy," a very singular disease; but as time will not permit, we must defer it to our next lecture.

A NEW PRACTICAL FORMULARY OF HOSPITALS, OR A

Collection of Formulæ of the Civil and Military Hospitals of France, Germany, Italy, Great Britain and Ireland, &c., containing the Indication of the Doses in which simple Substances, magistral and officinal Preparations of the Codex are administered, the use of New Medicines, and general receipts on the art of prescribing. By M. EDWARDS, M. D., and P. VAVASSEUR, M. D., of the Hospitals of Paris—1834. Translated and augmented by M. RYAN, M. D. &c. &c.

(Continued from p. 124.)

Boluses of Squills. H. de la Mat.

Rx. Pulveris scillæ, 3j;
Potassæ sulphatis, ʒj;
Oxymellis scillæ, q. s.

Divide in bolos xij quorum sumat duos quotidie.

Employed in certain dropsies.

Each bolus contains gr. iij of squills.

Diuretic Pills. H. of Italy.

Rx. Pulveris scillæ, gr. xx;

———— digitalis, gr. xvij;

Succi juniperi, q. s.

Fiat massa in pilulas x dividend. é quibus sumat unam omni horâ.

Each pill contains gr. ij of squills.

Hydragogue Pills. H. de Mont.

Rx. Scillæ, 3vss.

Extracti colocynthidis 3v.

Misce et divide in pilulas cc de quibus capiat unam mane nocteque.

Each pill contains about gr. ij of squills; the dose may be progressively increased. After taking them, the patient should drink a small quantity of an infusion of holly-oak.

These pills are purgative and diuretic.

Compound Pills of Squills.

Rx. Pulveris scillæ,

———— digitalis,

Extracti acetosellæ, ā ā 3j.

Fiat massa et divide in pilulas lxxij, e quibus iij ad ix capiendæ quotidie.

In dropsy.

Each pill contains gr. i of squills.

Compound Pills of Squills. Lond. H.

Rx. Scillæ radice recentis exsiccatae, 3j;

Zingiberis radice contritæ,

Saponis duræ, ā ā 3ij;

Ammoniacæ contriti, 3ij.

Syrupi simplicis, q. s. fiat massa cujus gr. iv ad xii sumendæ quotidie.

As an expectorant, in chronic affections of the thoracic organs.

Twelve grains of this mass contain about two grains of squills.

Expectorant Pills. H. of Eng.

Rx. Scillæ, 3ss;

Myrrhæ, 3jss;

Extracti hyoscyami, 3ij.

Aquæ q. s. divide in pilulas xxxvj, quarum sumat duas in die.

In chronic pulmonary catarrh, &c.

Each pill contains gr. i of squills.

Decoction of Squills. H. Italy.

Rx. Scillæ, 3j;

Juniperi, 3iv;

Polygalæ senegæ, 3iij;

Aquæ, Oj.

Coque ad dimidiam, cola, et adde,

Ætheris nitrosi, 3ss.

Misce; decocti hujus sumat cæger cochleare dimidium secundâ quaquâ horâ.

This preparation is a powerful diuretic, and is very useful in dropsy.

Diuretic Potion. H. de la Ch.

Rx. Mellis scillæ, 3iv;

Ætheris nitrosi, 3i;

Liquoris opii, 3ss;

Aquæ destillatæ valerianæ,

———— menthæ piperitæ, ā ā 3iv;

Syrupi simplicis, 3j.

Fiat potio, cujus sumat cochleare unum, secunda, vel, tertia, quaquâ horâ.

In anasarca arising from disease of the heart, &c.

Potion of Squills. H. Militaire.

R_x. Oxymellis scillæ, ʒ ss;
Infusi hyssopi, ʒ iv;
Acidi nitrici alcoholizati, 3 ss.

Misce; cochleare sumatur pro dosi.
As a diuretic.

Diuretic Potion. (H. N. D.)

R_x. Decocti, ʒ iij;
Aquæ florum aurantii, ʒ ss;
Oxymellis scillæ, ʒ ij;
Syrupi simplicis, ʒ j;
Liquoris opii,
Tincturæ castorei,
———— moschi, ā ā gutt vj;
Alcoholis nitrici,
Ætheris, ā ā gutt x.

Employed in treating certain dropsies.

Pectoral Mixture of Boerhaave.

R_x. Aceti, scillæ, ʒ vj;
Oxymellis scillæ, ʒ iij;
Sodæ sulphatis, ʒ j;
Decocti hordei, ʒ viij.

Fiat mistura, cujus, ʒ j sumatur singula semi hora.

Pectoral Looch. H. of Germ.

R_x. Oxymellis scillæ,
Syrupi althææ,
Mucilaginis gummi acaciæ, ā ā
p. e.

Misce, cochleare unum sumendum secunda quaquâ horâ.

In chronic pulmonary catarrhs.

Diuretic Mixture. H. of Amer.

R_x. Tincturæ scillæ, ʒ ij;
Ætheris nitrici, ʒ j.

Fiat mistura cujus sumat cochleare minimum quinquies vel sexies in die e cyatho infusi gentianæ.

EXTERNALLY.

Gargle of Squills. (Swedish).

R_x. Oxymellis scillæ, ʒ j;
Aquæ cinnamomi, ʒ x.

Fiat gargarisma.

As a stimulant in chronic angina.

Diuretic Liniment. H. of Italy.

R_x. Pulveris scillæ, ʒ j;
Succi lini vituli, ʒ ij.

Fiat linimentum.

Frictions should be made morning and evening, in cases where the patient is not able to take the preparations of squills internally.

Diuretic Ointment. H. of Italy.

R_x. Unguenti hydrargyri, ʒ j;
Pulveris scillæ, 3 ss.

Misce.

Used in frictions on the internal parts of the

thighs, and on the abdomen, in the same cases as the preceding preparation.

Medicinal, or Almond Soap.

A stimulant of the digestive organs, but more especially a diuretic. Like other alkaline preparations, it is used with advantage in gravel, and is useful in softening indurations, scrofulous tumours, &c. Externally, it is used in the treatment of indolent tumours, &c.

Subst. incomp. Acids, and all soluble salts, except those of soda, potassa, and ammonia, substances which contain tannin, &c.

INTERNALLY. Gr. x—3j, in pills.

Pilules de Savon. P. Gr. x—ʒij.

The *Pilules de Savon* of the H. de la Ch., differ from those of the codex, in not containing nitre; they are composed of grs. ij of the soap, and the powder of marshmallows. They are used as laxatives.

Compound Pills of Soap. H. de la Ch.

R_x. Saponis medicinalis, (vel amygdali), gr. vj;
Hydrargyri submuriatis;
Pulveris jalapæ, ā ā gr. iij.

Divide in pilulas tres, quarum capiat unam secundâ quaquâ horâ.

Alterant Pills. (Alibert).

R_x. Saponis medicinalis (vel amygdali), ʒ ij;
Extracti aloes,
Potassæ supertartratis, ā ā ʒ j;
Syrupi simplicis, q. s.

Divide in pilulas xcvj, quarum ij ad iv sumenda quotidie.

Pilules Fondantes. Hot. D.

R_x. Saponis medicinalis (vel amygdalis), ʒ iij;
Gummi ammoniaci,
Rhei, ā ā ʒ j;
Extracti aloes, gr. x;
Assafœtidæ,
Crocii, ā ā ʒ ss.

Divide in pilulas singulas, gr. iij, quarum sumat iv ad vj in die.

Bolus Savonneux. H. of Germ.

R_x. Saponis medicinalis (vel amygdali), ʒij;
Olei carui gutt., iij,
Syrupi tolutani, q. s.

Fiat boli iv, quarum sumat iv vel vj in die.

As purgatives.

Sometimes extracti aloes, grs. iv is added to render them more active.

Looch Savonneux. H. of Germ.

R_x. Saponis medicinalis (vel amygdalis), ʒ j;
Olei amygdalæ dulcis, ʒ j;
Syrupi mannæ, ʒ jss.

Cochleare magnum sumatur pro dosi.
As a laxative.

EXTERNALLY. In lotions, fomentations, and frictions, q. s. dissolved in alcohol or water.

Emplâtre de Savon. P. Résolutive.

Honey Soap. H. of Italy.

Rx. Saponis medicinalis (seu amygdali),
Mellis, āā ʒ iv;
Potassæ subcarbonatis, ʒ ss;
Aquæ fumaris, ʒ ss.

Misce.

Employed in frictions to cause resolution of indolent tumours.

Enema of Soap. H. of Italy.

Rx. Saponis medicinalis (seu amygdali), ʒ j;
Mellis, ʒ vj;
Decocti hordei, ʒ vj.

Fiat enema.

Laxative Suppositorium. H. of Italy.

Rx. Saponis medicinalis (seu amygdali), ʒ ij;
Sodæ muriatis, ʒ j;
Mellis, q. s.

Fiat suppositorium magnitudinis solitæ.

Cataplasm Maturatif. H. of Germ.

Rx. Saponis duri, ʒ j;
Micæ panis, ʒ viij;
Lactis, Oj.

Decoque.

Decoct for some time.

Used to hasten suppuration in phlegmon.

Fomentation of Soap. Hot. D.

Rx. Saponis medicinalis (seu amygdali), ʒ ss;
Spiritus rectificati, Oij. liqua.

Employed in spasms, contusions, &c.

Lotion of Soap and Alcohol.

Rx. Saponis medicinalis (seu amygdali), ʒ iv;
Alcoholis, Oj. liqua.

Employed with success in the treatment of scabies.

This lotion has the advantage of not soiling the linen, but it is rather expensive. In the Hot. St. Ant. this preparation is called *Liniment savonneux alcoolique*.

The *Lotion alcoolique savonneuse* of the H. des Inf. contains but half this quantity of soap, and is used in the same cases.

Acetate of Potassa.

In small doses, this substance is diuretic, and may be employed in the same cases as the above-mentioned medicines.

Subst. Incomp. The greater part of fruits, almost all acids, and many salts.

INTERNALLY. As a diuretic; the dose is ʒj — ʒj, in solution, several times a day.

As a cathartic, ʒvi — ʒj, and more.

Liquid Acetate of Potassa. H. of Germ.

Rx. Potassæ acetatis, unam partem,
Aquæ destillatæ, duas partes.

Liqua. Dosis ʒj vel iij.

Another. (Jackson.)

Rx. Decocti genistæ recent., ʒxij;
Potassæ acetatis, ʒij;
Sp. armor. comp., ʒj.

Sit mistura, de qua capiat ʒiiss, ter quaterve in die.

The acetate of potassa is also combined with compound spirit of juniper, digitalis, nitrous ether, colchicum, &c.

Simple Diuretic Ptisan. H. of Italy.

Rx. Potassæ acetatis, ʒij;
Decocti graminis canini, Oj.

Misce.

Cyathus sumatur pro dosi.

Diuretic and Sedative Potion. H. de Mont.

Rx. Potassæ acetatis;
Oxymellis scillæ, āā ʒj;
Liquoris opii (Sydenham), gutt., xv;
Aquæ tilis, ʒiv;
Syrupi, ʒj.

Fiat potio, cujus capiat cochleare pro dosi.

Diuretic Potion. Hot. D.

Rx. Vini albi, Oj;
Liquoris potassæ acetatis, ʒj.

Fiat potio, cujus sumat æger cyathum pro dosi.

Used in dropsy, anasarca, &c.

Potion, with the Acetate of Potassa. H. de la Mat.

Rx. Potassæ acetatis, ʒij;
Syrupi aceti, ʒj;
Aquæ cinnamomi, ʒj;
Infusi tilis, ʒiv.

Fiat potio, cujus sumat cochleare pro dosi.

As a diuretic, and in some organic affections of the abdominal viscera.

[*Diuretic Powder.* (Ryan).]

Rx. Pulv. jalapæ comp., ʒvj;
—— scillæ,
—— digitalis,
—— hydrarg. submur., āā gr. xij;
—— cinnamomi comp. ʒj;
antimonialis, gr. xij.

In chartulas xij, divide quarum sumat unam mane nocteque.

These powders are diuretic, diaphoretic, and cathartic; are extremely efficacious in dropsies which do not depend on organic disease of the heart, liver, or kidney. I have used them for ten years at the different public institutions of which I am, or have been physician, and in general with great advantage, as a vast number of students can testify. T.]

Antilacteal Bolus. H. de Lyons.

Rx. Potassæ acetatis, ʒj;
Conservæ calendulæ, q. s.

Fiat bolus.

To be taken during twenty mornings, to prevent hardening of the breast.

A cupful of a ptisan, made of herbs, should be taken immediately after it,

[*Diuretic Pills and Potion.* (Pearson).

R_x. Pulv. digitalis,
—— scillæ, āā gr. ix;
Extracti gentianæ, ℥j;
Olei juniperi, M. viij;
Syrupi simplicis, q. s.

Fiat massa in pilulas xij, dividenda quarum sumat unam bis vel ter in die cum haustu sequenti:—

R_x. Aquæ ferventis, ℥jss;
Potassæ supertart., ℥j—ij;
Sp. juniper. comp., ℥ij;
Tinct. cinnam. comp., ℥j.
T.]

Acetate of Soda.

This ingredient possesses the same qualities as potassa, but its action being less than that of potassa, it is consequently not so much used. The dose is ℥ij—℥iv, in a proper vehicle.

UREA.

According to the observations of M.M. Segalas, Fouquier et Barbier, this immediate principle appears to possess very remarkable diuretic properties. It is not much used,

INTERNALLY. Its dose is grs. xx—℥ij dissolved in sugar and water, in cases which require other diuretics.

ASPARAGUS (ROOT).

An active diuretic and aperient. Frequently used in dropsy, and in diseases of the urinary organs. The buds of the asparagus appear likewise to possess a sedative property. This substance is likewise used in hypertrophy of the heart, to calm the palpitations.

INTERNALLY. Decoction, ℥ss—i in Oij of water.

The dose of the *Apozeme des Cinq Racines*, P. is a small cupful at a time.

Sirap de Cinq Racines. P. ℥ij—℥i, to sweeten ptisans, and diuretic potions.

Diuretic Decoction.

R_x. Radicis asparagi,
—— cochleariæ, ā ā ℥i;
Baccarum juniperi, ℥ij;
Marrubii, pine, i;
Aquæ ferventis, Oj.

Decoque, per horam unam, et cola.

Cyathus sumatur misturæ hujus, omni mane.

To each glassful is added a spoonful of the following mixture:—

Syrupi scillæ,
Syrupi, āā ℥ij.

Another Diuretic Decoction.

R_x. Radicis asparagi, ℥j;
Aquæ, Oj.

Coque cole et adde,

Potassæ acetatis, gr. viij.

Decocti hujus, cochleare, sumatur pro dosi.

BUCHU.

A diuretic, and stimulant of the urinary organs. Employed with success in catarrhus vesicæ, retention of urine through weakness of the bladder, diseases of the prostate gland, the gravel, &c.

INTERNALLY. Powder. ℥j—℥ss daily in white wine.

Infusion. ℥ij—℥iv. to Oij of water, of which a small cupful should be taken, about every four hours.

Tincture of Buchu. Dublin.

R_x. Buchu, ℥ij;
Alcoholis, Oss.

Fiat tinctura, cujus ℥i—℥ij, sumat pro dosi.

Compound Infusion of Buchu. H. of Eng.

R_x. Infusi buchu, ℥ viij;
Tincturæ buchu,
——cubebæ, āā ℥j;

Fiat infusum, de quo sumat ℥j, ter in die.

[*Compound Mixture of Buchu.* (Ryan).

R_x. Infusi buchu, ℥ vj;
Tinct. ejusdem,
Tinct. cubebæ, āā ℥j;
Balsam. copaibæ, ℥i—iv;
Liquoris potassæ, ℥j;
Olei menthæ, virid. m v;
Tinct. opii, ℥j;
Mellis despum., ℥vj.

Sit mistura, cujus capiat cochleare amplum ter quaterve in die.

This will be found a valuable combination in gonorrhœa, leucorrhœa, and gleet.
T.]

(To be continued).

Review.

A Treatise on the Formation, Constituents, and Extraction of the Urinary Calculus. By John Green Crosse, Surgeon to the Norfolk and Norwich Hospital, &c. &c. London: John Churchill. pp. 231. 4to. and plates.

To surgeons and chemical philosophers the subjects of this treatise presents points on which much patient research and great ingenuity probably remain yet to be exercised. Of late years neither of these qualities have been wanting: the re-agents of the chemist have rapidly developed the constituents of the calculus which the operations of the surgeon extracted: and at this time we have arrived at considerable accuracy as to the former, while the modes of extraction are yearly becoming more perfect, by the combination of diminished pain during the operation, and of diminished danger consequent upon it.

Such, however, is not the success in the discovery of the causes on which the formation of the calculus depends, and Mr. Crosse announces an undeniable fact when he states at the commencement of the first chapter, that "few subjects in medical science are involved in greater obscurity than the formation of urinary calculi." This ignorance, however, more particularly refers to the immediate train of phenomena by which the constituents of the urine come to be so changed or exaggerated in quantity as to form calculi. There are certain causes acting generally on the process of digestion, which are too palpably concomitants of such formation to admit a doubt of their influence on it. Accordingly we find, in this treatise, *dyspepsia* prominently advanced as one of the causes of urinary calculi; and though *dyspepsia* is frequently found without calculus, it is equally certain that disordered urine ever accompanies disordered digestion: it requires only the addition of other exciting causes, "as want of exercise, variable climate, peculiar diathesis, or local disease in some part of the urinary organs," to originate calculous concretions. Besides *dyspepsia*, Mr. Crosse accuses over-exertion of the kidneys as a cause of calculus: this is more likely to take place in circumstances where the skin is exposed to influences which check its function of transpiration, while by the well-known sympathy between that surface and the kidneys, the function of the latter is inordinately put into play, and therefore made more liable to disease. In the previous paragraph the author mentions the excess of spirituous fluids and of alkalies as causes of the disease in question. Would it not be reasonable to suppose that these also act by inducing the inordinate action alluded to? In the county of Norfolk, where calculous disorders are so rife, there would appear to be an unlucky combination of causes, and Mr. Crosse is of opinion that "the great prevalence of a north-east wind, and the frequent, sudden, and very considerable changes of temperature acting upon persons already affected with the most prevailing disorders of the district, *dyspepsia*, *scrophula*, or *rheumatism*, cannot but be regarded as most powerful agents in giving rise to such frequent cases of gravel and stone."

The local causes of calculous disorders are

severally mentioned to be external violence, injuring the structure of the kidneys, stricture, hypertrophy of the prostate gland, hernial displacement of the bladder, sacculi of the inner membrane of the bladder, extraneous substances, and sedentary habits. With regard to the *modus operandi* of these causes, some act by disorganizing the tissue of the kidney, and others by retaining the secreted urine, and inducing catarrh. Of prostatic enlargement he observes, that "it disposes to calculous disorders, both in the kidney and bladder, particularly in the latter, by inducing chronic inflammation and a catarrhal state of the inner coat of the organ, by keeping a quantity of urine always stagnant in the bladder, and by penetrating outwards through the urethra of smaller concretions."

Chapter the second treats of the chemical composition of urinary calculi. As separate treatises on this subject are plentiful, we shall merely give the particular experience of the author in the relative proportion of the various kinds of stone; his opinion as to the part more especially the subject of analysis is also worthy to be quoted; both are comprised in the following paragraph and table:—

"The analysis of every part of a calculus is of use; but the nucleus is calculated to excite most interest, because its analysis bears so directly upon the prevention of the disease; nearly all calculi situated in the bladder are formed upon nuclei of smaller calculi, originating in this organ or descending from the kidney, and of a size that would allow of their passing away by the urethra; hence it follows, that calculi of small size, such as often pass away spontaneously, resemble the nuclei of larger calculi, and are more deserving of being examined chemically than the surfaces of calculi found in the bladder after death, or removed by cystotomy. Entertaining this opinion, I began several years ago to collect all urinary concretions passed per urethram; and the first hundred, obtained from the male, being analysed before receiving a place in my cabinet, gave this result:—

Lithic acid or lithate of ammonia	72
Lithic acid and oxalate of lime	9
Oxalate of lime	14
Carbonate of lime	1
Triple phosphate	2
Fusible	2

Total . 100 "

The mechanical composition and growth

of vesical urinary calculi occupy the third chapter. Lithic calculi are of slowest growth, increasing at the rate of between one and two drachms in a year, rarely exceeding the latter. Calculi of the phosphates are in all respects the worst forms of the disease; they frequently accumulate with great rapidity. The most slowly formed calculi are generally the most dense and heavy: those formed rapidly present the opposite qualities. Mr. Crosse insists on the importance of studying the nuclei of urinary concretions as a necessary aid in the diagnosis.

In chapter 4th, calculi in the kidneys and ureters, and their pathological effects, are treated of. Several autopsies are given in illustration: the following familiar picture of the process of infundibular expansion is sufficiently happy:—

“The expansion of the pelvic and infundibular cavities of the kidney into one large bag, in which all trace of the original form is nearly obliterated, may be comparatively explained by a glove of indian-rubber, in which the part covering the wrist would answer to the ureter, that upon the palm of the hand to the pelvis, the fingers to the infundibula, and the tips of the fingers to the situation of the calyces; by inflating and enlarging this glove powerfully enough, the fingers would become obliterated and the whole expanded into one large cavity; precisely what happens to the dilatable and elastic membrane of the cavities of the kidney: and the comparison is not weakened by the infundibula being about twice as numerous as the fingers of the elastic glove.”

The facts connected with the presence of renal and uretral calculi are also summed up with much felicity.

“The evils produced by renal calculi are not to be measured by their size; a small passable calculus, in its course along the ureter, causes most severe and acute symptoms, which every practitioner is familiar with; a calculus firmly impacted in and filling the ureter, sometimes gives little pain, although leading to complete destruction of the renal organ: whilst a large calculus occupying the pelvis, and allowing the urine, as it is secreted, to pass on towards the bladder, with much pain brings no immediate danger, and may remain for many years, increasing sometimes to so great a size that the parenchyma is absorbed to make room for it: and when the calculus is not very large, by keeping up irritation and an increased flow of arterial blood to the organ, it often leads to an

augmentation of its glandular substance. A considerable calculus in the pelvis brings less danger of obstruction to the passage of urine, than of acute inflammation, which arising in one kidney, often affects both and creates fatal suppression of the urinary excretion: in the absence of acute inflammation, a calculus in the pelvis creates a dull heavy pain in the loins, extending sometimes to the scapulæ, at others over the buttocks or to the groins and scrotum, and along the thighs: bloody urine after exercise: dysury and frequent micturition as if there were a stone in the bladder: and by chronic inflammation of the membrane lining the cavities of the kidney, an abundant catarrhal or muco-purulent secretion is formed which appears with the evacuated urine.”

Leaving for the present the consideration of the phenomena dependant on the presence of calculi in the bladder, which, if the course of the canal had been taken, would have next demanded attention, Mr. Crosse passes, in chapter 5th, to the subject of urinary calculi situated in the urethra, and of calculous concretions in the prostate gland. In these cases the calculus, when yet very small, passes from the bladder, becomes fixed in the commencement of the urethra, increasing there in process of time to a considerable magnitude, so as to lodge partly in the prostatic portion of the urethra, and partly in the bladder. The best mode of ascertaining this state of affairs is the examination with the finger *per anum*. The symptoms are, for the most part, much more severe when the stone lies partly in the neck of the bladder and partly in the prostatic portion of the urethra. But when it occupies the prostatic or membranous portion of the urethra alone, and without extending into the neck of the bladder, it usually creates less urgent symptoms, and may remain there for many years without seriously affecting the health. Sometimes, however, the contrary is the case, and the author gives an instance to prove it. To remove a stone in the membranous urethra, we should endeavour to get the finger beyond it, push it forwards in the perinæum, and remove it by a semilunar incision.

The remaining attractive portions of this chapter we give in the words of the text:—

“Calculi lodged in the urethra, even of large size, are sometimes not discovered with the sound or catheter, which it seems difficult to explain, unless we suppose

the operator, thinking only of the bladder, neglects the slighter impression conveyed by the stone in the urethra: it may however happen that the muscles about the urethra, embracing firmly the instrument, prevent its touching the calculus, which is generally lodged in a depression or cavity, formed by it and answering to its size.

"Large calculi lodging in the membranous portion of the urethra sometimes work a spontaneous cure by finding an exit at the perinæum, the soft parts ulcerating or sloughing, or abscesses forming so as to let the calculi into their cavities. A boy, aged seventeen, after suffering for above ten years from very painful symptoms, and having abscesses and fistulous openings in the perinæum, got rid of a calculus in this direction, weighing two ounces and a quarter and measuring nearly four inches in length; it is now in my collection: the boy lived two years afterwards, voiding other smaller calculi by the wound, which never healed.

"Sometimes calculi in the urethra, quitting that passage by ulceration or otherwise, and getting into the cellular tissue under the integuments, descend into the scrotum, and still maintaining a channel of communication with the urethra, so that the urine gets access to them, they increase to an immense size; I am acquainted with a case where a calculus weighing eight ounces was removed from the scrotum of a man thirty-six years of age, and which I conjecture to have been formed in the above manner. The removal of such concretions is a very easy and safe operation; they are probably always composed externally of the phosphates, and if the explanation I give be correct, the cavity in which the stone is lodged will be found to communicate by a fistulous channel with some part of the urethra."

"Concretions of another sort about the neck of the bladder ought to be noticed. In aged persons, particularly with hypertrophy of the prostate gland, a bladder diseased, and the veins about it and about the rectum varicose, concretions of phosphate of lime, varying in size from a pin's head to a kidney-bean, are often found in the veins; sometimes they present the appearance of a white pea, as in fig. 6, (b) of plate ii, and an inequality or projection is observable (c) answering to the surface by which the body adhered to the coats of the vein. These concretions have no connexion with the urinary or any other excretions, and should not be regarded as calculi; they are a morbid growth from the coats of the vein, to which at an earlier period they are invariably adherent, and a membrane covers them, upon the surface where not adherent, which I presume is the extended inner coat of the vein, and the morbid growth originating in the outer coat. Fig. 6, (a) of plate ii, shews

a portion of vein containing one of these concretions, and d, e, f, g, exhibit them of different shapes and size; their chemical composition is chiefly phosphate and carbonate of lime, and they approach nearer to ossifications than to calculous concretions. I remember that Professor Meckel has well represented them, but know of no English author from whom they have received the same attention."

The author is remarkably brief on the subject of calculi in the urinary bladder, and their pathological effects, in the 6th chapter: his apology may be ours, namely, that the whole is familiar to all surgeons.

Chapter 7th is on sounding for a stone in the bladder. By sounding, the author not only means the introduction of an instrument through the urethra into the bladder, but "all collateral methods of gaining information, not only of the presence of a stone or stones, but their size, situation, mobility, and texture." Here, again, the author lauds the examination *per anum*, and says, "I have known so much mischief arise from the undertaking of operations for stone, without previously examining the rectum, that I am induced to represent forcibly the propriety of doing it in every instance: I should deem myself as little justified in omitting this method of exploration, as in operating without having sounded at all."

In the 8th chapter, the removal of vesical calculi through the urethra is treated of. After stating the occasions on which this operation is admissible or advisable, and the symptoms that are to lead us to a knowledge of the existence of such occasion; after also describing the introduction of the urethras vesical forceps, the author proceeds to give these practical suggestions.

"If the stone, fairly grasped by the forceps, can be brought into the urethra, it will in general pass readily through the prostatic portion of this canal, which offers the least resistance of any: and when it arrives in the membranous part, you may feel it *per anum* with the left forefinger, and if of considerable size, you can press it forwards, supporting it and preventing its slipping from the grasp of the blades: if very large, you may not be able to bring it any further than the membranous part of the passage, in which case, rather than make violent attempts to do so, you should extricate the forceps from it, and keeping the left forefinger curved beyond it *in ano*, press it forward in the perinæum, and cut upon

it by the gripe or Celsian method, or by a lateral incision, as in lithotomy. If the calculus can be brought into the spongy part of the urethra, it has escaped the resistance of the most powerful muscles and also of the triangular ligament, and can be carried on to the orifice: I have, however, been obliged to cut calculi out, not only at the perinæum, but just anterior to the scrotum, finding it impracticable to bring them further forward, on account of their size, or having allowed the forceps to slip off and being unable to re-apply them. Under some circumstances, where you cannot get the calculus further onward, you may be glad to push it again back into the bladder, reserving it for an early future trial: but where practicable, it is better to cut the calculus out at once. Sometimes a stone, which has been readily made to traverse the rest of the urethra, cannot be made to pass the narrower and firmer orifice: when difficulty is experienced in this situation, rather than persist in using great force, it will be proper either to crush the stone, or to make an incision for its exit just behind the external orifice, whereby the patient will be spared much pain.

Of lithotrity and lithotripsy, Mr. Crosse says little beyond an approval of those operations. He thinks that the lithotriptic percussor very recently introduced to notice possesses many recommendatory qualities, and "promises to be ultimately employed by most surgeons of experience." He alludes to the instrument constructed by Weiss, and used by Baron Heurteloup.

After this lengthened notice we can only mention the subjects of the three remaining chapters of the Treatise: chapter 10th, including the operation of litho-cystotomy; chapter 11th, being some remarks upon the treatment required after litho-cystotomy; and chapter 12th, treating of hæmorrhage after that operation.

The Appendices, three in number, contain cases of litho-cystotomy (of which there are twenty-two), tables of results of the operations of litho-cystotomy and a very full bibliography of gravel, stone, and lithotomy, extending even to individual memoirs in British and foreign periodicals.

The plates are twenty-nine in number, and have the same arrangement as the letter-press, that is, commencing with the kidney and ureters, then proceeding to the urethra, and lastly shewing the morbid anatomy of the bladder. As works of art we cannot say much for them; uncoloured, they

are stiff and harsh, and the colouring is altogether unworthy such a work. Still they may be held to be faithful representations of those changes of which the calculous concretions are either a cause or a consequence. As a practical work it deserves and we hope will have, the hearty support of the profession. It has already received the approbation of a body well able to judge of its merits—the Royal College of Surgeons—being the Jacksonian Prize Essay for the year 1833.

—o—
On Dentition, and some Coincident Disorders.
By John Ashburner, M.D., &c., &c. 12mo., pp. 235. London, 1834. Longman and Co.

The Gums, with late Discoveries on their Structure, Growth, Connections, Diseases, and Sympathies. By George Waite, M.R.C.S. 12mo., pp. 160. London, 1835. Longman and Co.

A vast deal has been written on dental surgery during the last few years, a great many volumes of all sizes have appeared, and these may be classed into good, bad, and indifferent. It is not easy to refer those before us to any one of these classes. Both the writers are entitled to some merit in directing attention to the influence of irritation of the teeth or gums as a common cause of constitutional derangement. Every physiologist will acknowledge the truth of this doctrine, and every pathologist may illustrate it, by the fact that a slight wound on a finger or toe may induce tetanus—that disease in any part may disturb the functions of the entire body.

Both these works are worthy of attentive perusal.

Dr. Ashburner, it is true, appears to ride a hobby; he can find the cause of a thousand and one disorders in the gums, just as Abernethy did in the stomach; but, nevertheless, both are perfectly right: as irritation in either part would, like irritation in any organ in the body, derange the whole economy. Dr. Ashburner has compressed a great deal of instructive information into a small compass.

Mr. Waite, has given the anatomy and physiology of the gums and teeth, and also a valuable lesson to mere mechanical dentists. He shews the importance of the teeth to the nutritive process, and the evils caused

by the irritation excited during their development; the fevers, convulsions, the congestion and hydrocephalus, the diseases of the lungs, intestinal mucous membrane, abdominal glands, cutaneous affections, &c., &c. He also adduces many facts to prove that the condition of the gums influences the soundness of the teeth, which every well-informed medical practitioner will acknowledge; as also that without attention to this indubitable fact, all operations will and must fail. We fully agree with our author, and are bound to state that his labours deserve the consideration of the profession. Mr. Waite's work may be perused with advantage by the general as well as the medical reader.

—o—

The London Anatomist; or System of Anatomy, Physiology, and Surgery, combined.
By G. D. Dermott, Lecturer on Anatomy, Physiology, and Surgery. No. 1, 8vo., pp. 94. Price 2s.!! Plate of the Superior and Inferior Extremities—coloured.

THE author of these works is known to the medical world, as one of the best teachers of anatomy in this metropolis. His numerous works and anatomical plates are too favourably known to require our eulogium. He has for many years past been a very popular lecturer, during which, he has given a most scientific view of the sciences upon which he now writes, and has consequently had crowds of pupils. The work before us, which is only a part of a voluminous one, bears internal evidence of the ability of its author. The arrangement adopted is the very best—the anatomy, physiology, and surgery of the human body. It may be objected, that we are too favourable to it; but we answer, that we have for years adopted a similar arrangement in our own lectures, as we believe it to be the only rational one in teaching the practice of medicine in all its branches. We hold it essential to inform our pupils of the anatomy or structure of an organ, of its physiology or functions, of its pathology, before we describe the nature and treatment of its diseases. It would, in our opinion, be absurd and useless to describe diseases and their treatment—indeed students could not comprehend them properly, unless acquainted with the anatomy and physiology of organs. It is always to

be recollected that elementary lectures are delivered to those unacquainted with science; that scientific terms must be explained, or they cannot be generally understood; and therefore, expletives are essentially necessary, as they enable every individual of a lecturer's class to understand him clearly. His auditory are too often composed of many individuals who have had a superficial, or indeed no preliminary education—no knowledge of those languages from which scientific medical terms are derived, and consequently such persons could not understand any medical lecturer, unless he gave the explanation of the more difficult, nay, of most of the terms he is compelled to employ.

It will be admitted by those conversant with science, that the most natural course to adopt in teaching anatomy and surgery, or medicine, is first to describe the structure of each organ, then its function or use, and then its diseases, whether medical or surgical. This plan has been already adopted by Mr. Bransby Cooper, in his excellent lectures on anatomy, physiology, and surgery—a work we were the first to praise, and which will speedily re-appear in a second edition. Whether Mr. Cooper or Mr. Dermott first followed this arrangement in lecturing we know not.

The nature of the work before us precludes the possibility of a lengthened review in a weekly medical journal; because to do the author justice, it would be necessary to quote several pages, which our limits do not allow. Thus the first twenty pages are devoted to the following subjects:—general properties of bones; the forms of bones; chemical composition; structure and growth of bones; organization; re-union of bones; and diseases of bones. Were we to do the author justice we should extract the whole of these articles, which would fill two-thirds of our space. We shall, however, give a specimen of the work, but strongly recommend our readers to peruse and possess the original. The student and the practitioner will find it of great value, and its remarkable cheapness is another recommendation.

The author, after describing the physiology of the periosteum, alludes to the vessels that secrete bone and effect its re-union.—

“When a bone becomes dead, most fre-

quently the dead portion or sequestrum is encased within the new formed living bone, and being lessened in size by the action of the absorbents, is loose within it. All these facts show the importance of the periosteum in the production of bone.

"The doctrine of Duhamel was opposed by Haller and Dethleef; they maintained that the gelatinous fluid, which is to become the cartilaginous nidus, is not produced by the changed or altered periosteum, but merely extravasated from the extremities of the fractured bone, and in a particular manner from the medullary membrane. If a living bone is pierced and the membranes of its marrow are destroyed, the old bone dies and a new one is formed from the periosteum, which will encase the dead. If, however, the operation being reversed, the periosteum is destroyed, but the nutritious vessels of the bone and the membranes of the marrow are left entire—the new formed bone will be secreted by these, and will be contained within the old—the dead forming the encasement. Bone is also frequently deposited in the centre of cartilage, in the natural process of ossification. So that it may be produced from any part of the vascular system of the bone—either from the vessels in periosteum—the membrane of the marrow—or the substance of the bone itself.

"During the first stage of re-union, from the first to about the tenth day, there is extravasation of blood, and a swollen and reunited state of the periosteum and soft parts around the fracture. About the tenth day the redness has disappeared, the blood is absorbed, and the effused lymph is coagulated. The second stage extends from the tenth to the twenty-fifth day; during this stage the lymph effused externally to the fracture and the original swollen periosteum become cartilaginous and then osseous, so as to form the osseous clasp or hoop of Duhamel; while a similar internal clasp is forming from the membrana medullaris, and either partially or totally, for a time, blocking up the internal cancellous cavity of the bone; and whilst the principal permanent part of the process of ossification is only about to commence.—The bone during the whole of this stage is still somewhat flexible. The third stage extends from the twenty-fifth day to the end of the sixth or eighth week; during this time the external and internal bony clasps become more ossified and inflexible; but the solid ends of the fractured portions do not accept of an osseous union. During the fourth stage, which lasts from the sixth or eighth week to the end of the fifth or sixth month, the bony clasps become completely ossified and inflexible, a new periosteum is formed from the surrounding condensed cellular membrane, the continuity of the membrana medullaris is also restored, and

the ends of the bone become united by osseous matter, so that a trace of the previous solution of continuity is scarcely distinguishable. During the fifth stage, which reaches from the fifth or sixth month to the twelfth, the direct union between the extremities becomes consolidated and very strong, whilst the two provisional clasps are absorbed, the irregularity of the surface of the bone becomes removed, and the medullary canal restored. Should, however, the two ends of a fractured bone not be brought into just apposition, but touch each other laterally, then the provisional bone or callus becomes the definite medium of union.

"Any artery in the body may assume such a diseased and altered action as to produce bone; which is thus formed where it should not be, in the tendons, joints, the great arteries and their valves, the flesh of the heart itself, and even the substance of the brain: however these are mere depositions of inorganic calcareous matter, and are not fibrous—this process is therefore generally called false ossification.

"Observe that bone is prepared, and separated from the blood, by a vital action of the vessels belonging to the osseous system, or just as the actions of the system, as a whole, assimilate the aliment to its nature by a living process, and so find material for the growth and waste of the body—so these less systems (of which the osseous is one) by their specific, living actions, build up their own structure—from the material or from the blood thus produced; and these by their combination of action, constitute the animal economy."

This extract enables our readers to estimate the manner in which this work is executed; and we can assure them that the whole is equally concise and comprehensive. In conclusion, we cannot refrain from expressing our favourable opinion of the coloured plate of the arm and leg just published by Mr. Dermott. This illustrates the vessels, nerves, and muscles of the parts just mentioned, and will be a great assistance to the student and operative surgeon. It is evidently copied from nature.

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Foreign Medicine.

Cold Water in Surgical Diseases.

M. BERARD, in a paper on this subject, after citing numerous cases, comes to the following conclusions:—

1. Cold water, topically applied, should be made to act in an uniform, continuous manner, and until no fear remains of inflammatory action; irrigation by one or more capillary syringes is most effectual; wet cloths are less so.

2. Continued application of cold water is an infallible means of preventing and combating inflammation in the worst cases of traumatic lesion, as in those of bullet wounds, crushing weights, those from the dissection and extraction of cysts situated among the tendons of the hands, &c.

3. Gangrene is the only thing to be feared from long-continued irrigation; when it supervenes it is not in the wound, but the parts around it, and comes on when the whole of the circumjacent parts have been bruised and disorganized by violence; it is caused by the obstacle opposed by the cold water to the free circulation of blood.

4. M. Berard has had no opportunity of using cold water after amputation, but he firmly believes that it would prevent most of the local and general accidents which the operation too frequently induces, and would also favour union by first intention.—*Archives Generales*, January 1835.

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Immense Osteosarcoma of the Lower Jaw, disarticulation of the right half of the Bone, with dissection of the ulterior and right lateral portions of the Pharynx.

M. Beau, 24 years of age, had been in perfect health up to the end of 1832. In consequence of an irritation caused by the decay of the last but one molar tooth of the right lower jaw, an inflammation and suppuration of the cheek came on, and several abscesses in succession formed, although the presumed cause of the mischief, the tooth, had been extracted. The alveolus remained fistulous, and to make matters worse the wisdom tooth began to grow; for this a scarification was made. Five months passed, and the fistula then cicatrized; but immediately afterwards another succession of abscesses opened externally on the same cheek, leaving an inflammatory congestion against which antiphlogistics were used. It was, however, never entirely reduced, and after about six months there still remained a small hard and indolent tumour towards the angle of the jaw. Meantime the alveolar edge of the bone was undergoing changes of the most serious kind. As before stated, a scarification of the gum had been made. From the edges of the wound and the alveolar fistula some vegetations proceeded, which now began to annoy the patient. Fomentations of the cheek made them rapidly worse, and the inflammation of the parts visibly increased. Nothing particular passed and the progress of mischief was very gradual up to September, 1834, at which time the patient came to Paris to place himself under the care of M. Lisfranc.

At this time an immense congestion of the right side and lower part of the face was observed, extending below the middle of the throat behind, covering the carotid, as far as the upper part of the sterno-mastoid muscle; the lobe of the ear was pushed backwards,

and the tumefaction was gradually lost towards the zygomatic arch; anteriorly it reached the angle of the chin and the middle of the lips. The skin was sound throughout, but adhered in the centre to indurated subjacent tissues. It was difficult to tell the extent of mischief within the mouth, the swelling rendering the opening of the mouth impossible. However, a hard, smooth, and whitish tumour was seen approaching the centre of the lips, and pushing the tongue to the opposite side. This tumour originated from the back part of the right lower jaw, but it was a question how far back it extended, and this could only be ascertained by the finger. In order to obtain a sufficient opening of the mouth for this purpose, M. Lisfranc first attacked the outward inflammation surrounding the temporo-maxillary articulation, and meantime placed a wedge between the teeth. In reducing this congestion M. Lisfranc had two motives: one, to facilitate the examination of the mouth, and next to free the carotids so as not to implicate them in the operation; if the worst happened they must have been previously tied.

The tumour was sensible to pressure, and painful; the skin hot and discoloured. Emollients and 12 or 15 leeches repeatedly applied, were employed to it. M. Lisfranc advises in such cases to place the leeches two inches from the tumour: applied immediately upon it, they often increase the irritation.

As the irritation disappeared the skin became moveable on the tumour, the jaws daily became more open, and the congestion became circumscribed. After three weeks the finger could be introduced, but with difficulty. The swelling, however, though reduced, still persisted along the fore part of the carotids, and as it passed to the chronic state, hydriodate of potash, cerate, and compression were used. In this manner in a few months the swelling was sufficiently reduced to free the angle of the jaw and the carotids. But during the progress of this external treatment, the tumour within had vastly increased: it filled almost the whole of the mouth, pushing the tongue against the left cheek, and passing backwards to the entrance of the pharynx, so as to render the respiration difficult. The speech was unintelligible, and the deglutition exceedingly painful. It became, therefore, an urgent necessity to withdraw this enormous tumour, the more as a diarrhoea came on, caused no doubt by the ingestion the morbid secretions of the tumour and mouth. For the rest, the patient was in good health, and strongly insisted on the operation. Before deciding on it, the finger was introduced into the mouth, and discovered that the pharynx was not involved but simply joined to the tumour: the palate was nowise changed.

An incision, commencing at the edge of

the lower lip, three lines on the outer edge of the median line on the right side, descended perpendicularly to the lateral and middle parts of the larynx, turned around the tumour as it proceeded outwards, and passed upwards anterior to the carotids, then along the posterior edge of the ramus of the jaw, and finally terminated in a line with the auditory foramen, a small distance anterior to the temporal artery. This vessel was guarded by being marked by an assistant. The skin and subcutaneous cellular tissue were comprehended in this incision. The dissection of the flap was made from below upwards; the skin was found sound, only thinned by the distension of the tumour. The canine and second incisor were extracted, and at four lines on the side of the symphysis menti the body of the bone was sawed through. It should be understood that at the point chosen for the section the soft parts had been carefully incised. Detaching then this tumour anteriorly and inferiorly, partly with the bistory and partly by tearing, according to the strength of the adhesions, the branch of the jaw could be sufficiently separated to obtain a certainty as to the state of the bone and the connections of the tumour about the pharynx. The erosion of the bone in the mouth extending anteriorly as far as the first molar tooth, and posteriorly towards the internal surface near the angle of the jaw, it was decided that the bone should be taken away, the more as the altered tissues extended into its very substance. In the middle it was so confounded with and lost in the centre of the tumour, that it was impossible to separate them. Towards the pharynx M. Lisfranc ascertained that the tumour was merely joined to the latter, and did not involve its structure. M. Lisfranc detached below circularly; behind and before the carotid he separated with his finger, or divided with scissors the more resisting cellular bands, whilst an assistant's fingers covered the vessel and pushed it behind and outwardly.

Sure of the carotids, M. Lisfranc returned to the fore part of the tumour. Superiorly the tumour adhered so strongly to the anterior pillar of the arch of the palate that he found it necessary to sacrifice it; then continuing the ablation from above downwards, and before backwards, he examined the connections of the pharynx, which he perceived adherent to the tumour by its anterior and lateral part, and was drawn along with the tumour when the latter was moved. It was therefore necessary to dissect it carefully from above downwards, for at least the extent of three inches. Midway in this space the small muscles arising from the styloid process were found pushed back to the pharynx. The tumour being thus detached, the disarticulation only remained. The section of the pterygoid muscles was easily effected, but that of the tendon of the temporal above the coronoid process was exceedingly diffi-

cult. This process, by an anomaly that made it approach the formation of carnivora, rose as high as three lines above the condyle, being only separated from it by scarcely six lines; so that it was deeply situated under the zygomatic arch and near its base. The bony parts were in such close apposition that if the blade of a bistory were introduced, all movement was impossible. Then cutting the uniting parts of the temporo-maxillary articulation anteriorly and outwards, and drawing downwards, the coronoid process was gradually lowered. The remaining section was then more easily effected. Five or six arteries were tied: the lingual was the only one of any size.

During the operation the tongue was kept in its natural position. Previous to dissecting the pharynx, M. Lisfranc got rid of a great part of the internal portion of the tumour, premising the section by a ligature round the whole, in order to be à l'abri of any great hæmorrhage. He then waited for a short time for any hæmorrhage that might occur. In operations where flaps are to be re-applied and maintained by sutures, too much attention cannot be given to the prevention of consecutive hæmorrhage. Were it to come on it would necessitate compression on a flap in which the circulation is already at a low ebb, or even the removal of the sutures and their after re-application—consequences pregnant with inconvenience.

The flap was retained by numerous stitches. From the edge of the lip to the chin the twisted suture was preferred, in order to the better apposition of the surfaces and the giving to the inflexions of the corresponding integument. These ends were so well obtained that it was necessary to search for in order to find the point of union in the lips. In all the other parts of the wound numerous cut sutures were applied. At the lower part of the wound the skin formed a little hollow cul-de-sac looking downwards; this sinus, retaining pus, might facilitate its infiltration into the circumjacent lax filamentous tissue. A small longitudinal incision laid bare the cul-de-sac, which was left open as a mode of exit for pus. A large compress well covered with cerate, a thick layer (plumasseau) of lint to keep the flap gently applied to the subjacent parts, long compresses, and a chin bandage, constituted all the dressing.

By means of a tube, introduced as far as the base of the tongue the patient was enabled to drink. Deglutition, which was somewhat impeded on the following morning and the third day after the operation, in consequence of the traumatic inflammation, has been since perfectly easy. All has gone on well, and with remarkable rapidity. On the third day after operation the patient could sit up several hours; on the fourth he walked about his apartment; the sixth he went out on the boulevard; and on the tenth he came to La Pitié, where M. Lisfranc

shewed him to his pupils. He speaks much more clearly than before the operation; indeed he spoke tolerably well three days after that event.

There remains a paralysis of the face, and a partial one of the orbicularis palpebrarum: the patient can cover about two-thirds of the eye-ball. A portion of the lingual nerve was taken away with the tumour; during the section he felt a kind of vibration in the opposite half of the tongue, and he still feels it. Notwithstanding the loss of this nerve he retains the power of distinguishing tastes, on that side of the tongue.

The tumour was found to be at least four inches in the diameter of every direction. It was composed of a white, elastic tissue, similar to the fibrous polypi of the uterus. At its middle part it surrounded the bone, which, without giving traces of inflammation or ulceration, was worn and destroyed. The tumour seemed to arise from the periosteum of the degenerated alveoli; at its posterior part a portion of the lingual nerve, with some muscular fibres cut away with it, were observed.—*Gazette Medicale, Feb. 7, 1835.*

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Universal Remedy—Brandy.

An unfortunate and apparently crack-brained French mechanic, named Guillaume, has taken it into his head to address a memoir to the Minister of Public Instruction, stating that he has found a remedy for every possible disease, in brandy. The memoir (presented 1832) was referred to the Académie de Médecine, who very properly took no notice of it. But M. Guillaume was not to be so silenced: he writes again to the Minister and the Academy; upon which a committee of the latter "proposes to reply to the Minister, that this piece of scribbling being altogether astray from the most simple and received notions of physiology, of medicine, therapeutics, grammar, style, and orthography, is unworthy, in any point, of further attention."

To give our readers an idea of the grammar and style, we extract the following:—M. Guillaume announces, that he is acquainted with "*l'imperfection de l'art de la médecine, qui cependant est celle qui aurait dû être portée au plus haut degré de perfectionnement, même jusqu'au point de prolonger l'existence de l'homme, et de ne cesser de vivre que par vétusté ou par accident ! !*"

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Fracture of both Jaws.

A miner fell into a sort of pit, his mouth pitched upon a large wooden stake, and both his jaws were broken. These fractures, complicated with contusions and lacerations of the soft parts, were so directed, that the dental arches bent inwards were as if separated from the body of the bone. The upper jaw being reduced and maintained in situ consolidated very well. The lower one—

being only adherent by a thin slip of the gum, was taken off together with the six teeth it supported. The patient recovered, but remained with an infirmity that deprived him in great part of the power of speaking and chewing.—*Memoires de Clinique Chirurgicale, by M. Vallat.*

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The London Medical

AND

Surgical Journal.

Saturday, February 28th, 1835.

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REFORM IN THE COLLEGE OF PHYSICIANS.

WE had occasion, in a late number, to congratulate the Medical Gazette on the increasing liberality of its principles. If we were joyful then, we are now absolutely in raptures, and feel a Peri-like satisfaction in flying up to the Paradise of medical reform with the sweet tears of our repentant brother. The Gazette of February the 14th announces, not with a cold and ungracious assent, but with a glow of generous enthusiasm, a real reform "and no mistake" in the College of Physicians. They have actually agreed to abolish *in toto* the orders of candidates and inceptor candidates; they have consented that a degree from either of the English Universities shall cease to be acknowledged as a passport to the fellowship; they have determined that the alumni of Oxford and Cambridge shall take their place among the licentiates with the graduates of Edinburgh and Paris; they have made every licentiate of thirty years of age and four years' standing, eligible to the fellowship; and they have thrown open their doors to all men who have received a certain specified education, even though they may not have a medical degree. We think they might as well have let this last piece of liberality alone, as long at least as they continue to be merely a College of Physicians—a doctor without a degree is a kind of walking bull; our friends in Erin would

be apt to compare him to a gold-headed cane without a gold head—but let that pass. “If they do all this,” says our contemporary “and we assert that they have agreed to do all this—surely it will be admitted by every candid person that a prodigious step has been made in the good cause.”

C'est superbe! We really can hardly believe our senses; the thing seems too good to be true; yet our contemporary says it is so, and he “is an honourable man, and they are all—all honourable men.” We only wish that he had given us some pledge to make us quite certain of it; now if he had but staked his *reputation for consistency* upon it, we should have straightway banished every doubt, and resigned ourselves to all the luxury of joy.

We must not, however, be faint-hearted, the good cause will triumph; indeed it cannot fail, seeing that the *bad cause* has given up the ghost—where are its supporters? “an echo answers where are they!” Sir Harry is turned leveller, and the green journal cries *vive l'égalité!*

Our friend comments so admirably on the above-mentioned salutary mutations, that we “turn up the white o’ the eye to his discourse;” the only point on which we disagree with him, and that fortunately is not a practical one, is the motive from which these spontaneous reforms have sprung. He speaks of “the liberal spirit which seems to have prompted them”—now God forgive us, as William Cobbett would say, but we do firmly believe that there is not an iota of liberality in the whole transaction, and that Sir Harry and his merry men are simple antitypes of the beaver who bit off his tail. No matter however for motives; the cleansing tide of reform is rushing through the Augean stable of Pall Mall, and all the *fellows* have brooms in their hands trying who can sweep the hardest; we have only to say *macte virtute!* We now turn our eyes in another direction and ask what

the *twenty-two* of Lincolns Inn Fields are about? Will they too exhibit a few amiable traits of “spontaneous” liberality, or will they die game? Will they, like the fellows, judiciously bear a hand in sweeping the stable, or will they fatuously wait to be themselves swept with a besom of destruction?

We hope they have instinct enough left to avoid the latter insane line of conduct.

“Dii, prohibete minas! Dii, talem avertite casum!”

As for the *Rhabbarbarians* of Blackfriars we cannot discern a ray of hope for them. To recommend them to reform would be tantamount to advising them to expunge themselves from the face of creation, since, where a thing is an unmixed nuisance, reform and annihilation become synonymous. We would not advocate suicide, but could they not find out some gentle way

“to win
Oblivion, and melt out their essence fine
Unto the winds?”

Verily, if they devise not some “spontaneous” mode of extinction, we predict, in the Oriental style best suited to prophecy, that they will be pounded in the mortar of destruction with the pestle of scorn.

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MEETING OF THE MEDICAL PROFESSION AT LIVERPOOL.

For some time the medical gentlemen of Liverpool have been anxious to establish an institution by which they would all be connected in one general bond of honourable and efficient union. Accordingly, last December, a circular was addressed to the profession, acquainting them that a preliminary meeting had been held, at which it was unanimously resolved—1st, “That it is highly desirable that an attempt should be made to raise a sum of money, by subscription, sufficient to erect a building for the future reception and preservation of the Medical Library, with commodious rooms for a Museum of P.athological Anatomy, and for a Lecture-room, and apartments for a resident librarian.” And, 2ndly, “That an address be presented to the committee of the Royal Institution, requesting their permission to erect the proposed building on part

of the vacant ground belonging to and opposite to the Royal Institution, Colquitt-street." The circular added, that the contemplated building was intended "for the sole use of the profession."

The handsome sum of upwards of £600 was subscribed since the project was set on foot. Dr. Rutter, with a liberality which reflects infinite credit on him, put his name down as the donor of £300.

Agreeably to notification, (also by circular), requesting the medical gentlemen of Liverpool to meet at the Royal Institution, in Colquitt-street, on Tuesday, to take into consideration a communication from the president of that institution, respecting the erection of a building, &c., about 40 or 50 members of the profession assembled on that day, in the Lecture Room of the Royal Institution. Shortly after 3, p. m. Dr. RUTTER took the chair, and opened the business by stating generally the object for which the meeting had been convened. An address to the Royal Institution's committee had been delivered and laid before it. President Brooks read the communication to the committee of the Royal Institution, who regretted, as it was expressed, their inability, at that time, to recommend to the proprietors any steps—the annual general meeting of proprietors not being summoned until Friday, the 13th. A written communication from President Brooks was, however, transmitted instead of a former verbal one. It contained a general statement of the terms conformably with which the committee of the Royal Institution felt disposed to make a grant of land, on which a building for general medical purposes (such as holding public meetings, &c.) might be erected. This offer on the part of the institution's committee was, however, conditional, and in effect—that any such medical buildings, with the museum and property therein contained, should become the property of the present Royal Institution; but that the economy or management of such proposed building should be by a committee of medical gentlemen. Further, that the proprietors of the present Royal Institution should claim and possess right of *entrée* at specified hours, together with power to introduce non-residents at will. The apartments to be open to professional men without any controul on the part of such Royal Institution proprietors, &c. It was evident, that in these conditions there were advantages and disadvantages, 1st, On the score of advantages, they could have land for nothing, and, if the proposed terms were acceded to, permanence and security also. 2d, As to disadvantages, there was an absolute surrender of independent right in such property, including the pathological museum, &c. And if, for instance, at any future time, the removal of such moveable property should be considered expedient, or desired on their part, such removal would

be impossible, according to the tenor of the conditions named. And further, no mortgage could be effected on such building or property, &c. Upon an expression of the opinions of the meeting being requested,

Dr. CARSON, sen., rose and remarked, that, as he intended to say very little, he would observe that, in his opinion, the really important matter for the meeting and the medical profession to consider was—to raise a sufficient sum of money. How much would be required he did not know; but as to the mode of raising it he would say, if there were any other than that pointed out by the committee of the Royal Institution, then that other should be at once preferred. It would be better that the profession have land of their own than accept a grant of any which would so fetter them, and interfere with their future arrangements, which should be unconditional. Taking for granted, that a given sum was necessary to meet the expenses incurred by erecting a building for the use of the medical community of Liverpool, and that the whole of such sum could not be met by subscriptions from the profession, and donations from those liberally disposed, further funds could be forthcoming by effecting a mortgage. But money could not be raised by mortgage, if the proposed medical institution were connected, on such conditions, with the present Royal Institution. There were many other matters of only minor moment in appearance, which nevertheless, by him, were viewed differently. There were the mode and terms in which their property would be conveyed *legally*, to be considered. This would be a point involving many difficulties. Supposing, however, that the conditions named in the document before the meeting, from the president, on the part of the Royal Institution's committee, were accepted and gone into, what security, he would ask, would the medical profession have for their property? The Royal Institution itself might become insolvent. (*Hear, hear—Oh, dear no!*) He made such an allusion as at least a *possible*, if not a *probable* occurrence. To pass to still more subordinate matters, the proprietors of the Royal Institution were to have permission to introduce visitors and possess tickets for themselves. There need be no objection to that, provided such proprietors' tickets were not transferable; for if so, the result, need he say, would be injurious in many ways. The conditional grant of land stipulated farther, that the articles lodged in the proposed new institution should also be inalienable property! He (Dr. C.) really could not see why such a stipulation as that should be made. Conditions went far enough, if the building was to be virtually the property of the Royal Institution. Articles admitting of being removed should not be held inalienable. Advantages there might be in being connected with the Royal Institution; but there were many disad-

vantages. If any connexion whatever was made, which he thought should be avoided, such association of interests should be founded on mutual advantages, not confining all of them to one side.

Dr. JEFFREYS, on presenting himself to the meeting, cast his eyes at the empty benches, and regretted much that the attendance of medical gentlemen was so very inconsiderable. He regretted this, for as much as the object of the present meeting involved a subject upon which the feelings of the whole resident members of the profession must, more or less, be strongly interested. He thought that the wisest measure, without attempting too much at once, would be to proceed to appoint a committee from the body of those present, with instructions to consider the matter over, and collect as much information as possible respecting what would tend to advance the objects of the profession in their proposed new building, for their own general and particular purposes. Whenever such committee, as that proposed by him, considered themselves possessed of information of value, let a public general meeting of the whole profession be forthwith called by public advertisement. The present meeting consisted only of some forty or fifty gentlemen at most. Circulars sent out and addressed by any single individual must necessarily have overlooked many practitioners whose residences or practice lay in obscure parts of the town. Contributions in support of the proposed Medical Institution would, he doubted not, be afforded by many to whom circulars never had been issued, or, if issued, had not reached. Public advertisement would have precluded such impolitic oversights. The doctor next animadverted upon the document submitted to the meeting from the Royal Institution's committee: the advantages and disadvantages of accepting the offer of land had been alluded to from the chair, and by Dr. Carson. In his (Dr. J.'s) opinion, all the advantages was limited to the grant of land on which to erect a building; and in return for which "grant," there was, on the part of the profession, to be a virtual and absolute surrender to independent right in that property, fixed and moveable! The value of the grant was too petty—only some £240 or so—and what was that as a consideration? If there was, at length, to be an institution for the common benefit of the whole profession, it should be on a basis much more extended, and grants made on a much more liberal footing. As to making this and that property inalienable, neither the library nor funds accruing to it by yearly subscriptions could so be disposed of by any institution or set of men. Doctor Jeffreys here went into some episodal remarks at considerable length, touching the library and the state of its property. To a partial cry of "*Question, question,*" he observed that he would soon show the bearing of these remarks on the

question before the meeting to be sufficiently close. The difficulties on one side and another, in conducting and keeping up the Medical Library, which had been experienced by others present, as well as by himself, many years ago, would teach him to guard against such occurrences as were inseparable from mixed and conflicting interests, if he could prevent them, for the future. It appeared to him that really as little connexion as possible should be had with the present Royal Institution. Every one knew perfectly well with what high-sounding pretensions that institution had been blazoned before the public at a former period. Its partisans then maintained that it was to do this and the other thing. It was to vie with the most celebrated existing institutions in the metropolis; and outrival those of Dublin, Glasgow, and Edinburgh! But what had been the result? Shares originally £100 each, instead of having risen in value, had fallen lower and lower: they could now be had for 30 or £40. The profession could impart respectability to their proposed institution without being connected with the Royal Institution, which was a failing institution. It was not by money that any institution could be made respectable. Instead of its being desirable that the profession should covet connexion with the Royal Institution, the latter should truly rather feel eager to court the association of a scientific body like the medical profession, which would confer respectability on them. If "*respectability,*" which had been so much talked of, could only be procured by a junction with the Royal Institution—or, rather, if the profession had not an independent respectability—in his opinion it was premature, until it had, to propose a building for medical purposes. He, too, would remind the meeting of the necessity for being cautious and deliberate. They would be legislating not for themselves and existing generations, but for posterity. If there is to be any building, let it be one *sui generis* —peculiar to medical men. The corporation would, he doubted not, aid the profession in carrying into effect their public-spirited intension, when the time arrived. Dr. Jeffreys—after alluding to the great and confessed merits of the chairman, Dr. Rutter, the originator of the whole project, whose claims would be nullified if the conditions of the chairman of the Royal Institution committee were gone into—concluded by moving for the immediate appointment of a committee to consider generally what were the preferable means for effecting the objects desired.

Dr. MACDONALD entertained, so far, similar views, and would second Dr. Jeffrey's motion, which he did with pleasure. He thought it premature on the part of the present meeting, limited as to numbers, to come to any conclusion, or return a definite answer, other than a vote of thanks for their kind attention to the committee of the Royal

Institution. Such a meeting could not be considered as representing the opinions of the resident general profession. The meeting, too, was still in a very unprepared state. The price of a suitable space of land, apart from that offered by the Royal Institution, was unknown. The conditions on which the proposed "grant" were offered were, in his opinion, by much too partial—partial in favour of the institution, and much less liberal than he could have expected towards the profession. A new building, if erected, could not be called, or virtually be, the property of the profession. They would not be even allowed to remove at a future period, however the force of unforeseen circumstances might render it advisable, any moveable property lodged therein by their own industry, liberality, or zeal. He would give his support in favour of the appointment of a committee to gain information on all points; and also for a public general meeting being called, as early thereafter as possible, by public advertisement.

The **CHAIRMAN** thought it would be premature to nominate any committee for such general purposes, until the meeting had agreed how they should dispose of the conditional offer tendered by the Royal Institution committee. An answer was desired by that body, in order that it might come before the annual general meeting of the proprietors, as had been mentioned. He had only had Mr. Brookes's reply since Saturday last, and he (Dr. R.) lost no time in calling this meeting to decide upon it.

Dr. BAIRD viewed the conditions on which the grant of land would be made as very hard indeed. The proprietors of the Royal Institution would be the trustees of the new building, agreeably thereto. He contended that the predominance of the trusteeship should be centred in medical men. If subscriptions for a building upon liberal principles, and on an independent basis, were brought before the public eye, there could be no doubt of public support being forthcoming. The Medical School of Birmingham, on its own independent basis, met with handsome pecuniary aid from the non-professional public; and the public of Liverpool would be no less liberal and public spirited.

Mr. BLACKBURNE, so far as could be gathered from several wordy and tedious repetitions, appeared to be warmly in favour of accepting the offer from the committee of the Royal Institution. He could see no force in any of the objections offered, except, perhaps, to claiming a right to the property of moveables. With reference, however, to any such claim to property in the museum of morbid anatomy, provided no right was involved to deprive medical men of such property, he could see no objection to that. A properly drawn up trust-deed would be ample security. All that the proprietors of the Royal Institution seemed to

claim was simply, that ~~they~~, and none else, should be the owners and trustees of the property, legally considered. Had they even claimed, in the same spirit and sense, a right to the property of the medical library, there could be no objection but one of mere feeling, even to that. He at the same time had no objection to a committee after the chief question was disposed of, if then necessary.

Amidst a guerilla style of remarks from different gentlemen, while keeping their seats, the *ad interim* secretary to the Royal Institution observed, that the document read from Mr. Brookes must be regarded rather in the light of a communication from one private gentleman to another, than as an official intimation.—How this observation told upon the ears of the meeting cannot be stated. No comments whatever passed upon it.

Mr. CHRISTIAN here asked what was the sum of money which required being raised. Was there any information lodged with the meeting as to the plan, extent, and so forth, of the proposed building? Until the profession found where a check to their progress lay, they had better agree to let the proposal from the Royal Institution stand over, to be availed of or not, as might seem expedient at a future period.

Mr. C. BYRON echoed the words of Mr. Blackburne.

Mr. ROGERSON could confirm what had been stated as understood of the existence of suspicions, on the part of many, if the Royal Institution had any connexion or controul over the proposed institution. There were not only suspicions afloat, but a disposition to withhold their pecuniary aid or support in any way from the Medical Institution, if the committee of the Royal Institution should have any power over the property. It certainly would carry a strange appearance and impression before the public, if the profession were to permit their property to be vested by a trust-deed in trustees appointed by the proprietors of the Royal Institution. Surely the profession were competent to manage their own affairs, and take care of themselves.

Dr. ROGER SCOTT was against any final opinion being given to the proposal.

Dr. FORMBY here said—"Mr. Chairman, I have really very little to say at all: and, as I have been so short a while in the room, perhaps I ought to say nothing at all. But since I am upon my legs, I will observe, that if the profession can carry this work on by themselves, let them do so—provided they can. If they cannot, which is my opinion, then it will be as well that they connect themselves with the Royal Institution; for, unless so connected, the public at large will not support them in their undertaking." (*Hear, hear.*)

Dr. ANDERSON contradicted the last sentiments uttered by Dr. Formby. The public in general were not now likely to be biased

by the mere circumstance of any institution or those connected with one, supporting any proposal of intrinsic and independent merit.

The CHAIRMAN proposed taking the sense of the meeting, as to what reply should be returned to the Royal Institution's committee. Before this was done, at the suggestion of Dr. Thorburn, the conditions were again read distinctly aloud, several gentlemen having entered subsequently to the former reading of the document. Mr. Neill inquired if the Corporation would grant a sum of money as an equivalent for the surrendered use of that building, and if such sum (£1,000) would be gifted in aid of the proposed institution. It appeared from the Chair, that the Corporation had not been conferred with on the subject as yet.

Upon the sense of the meeting being taken, a committee of five was appointed to confer with the representatives of the Royal Institution, and to report generally upon the ways and means which would appear desirable; the result to be laid before a public general meeting, to be called by advertisement. Thanks being by acclamation, voted to Dr. Rutter, as chairman, the meeting dispersed.

Hospital Reports.

WESTMINSTER HOSPITAL.

Renal Disease.—Case of Wm. Hall, concluded from page 831 of our last Volume.

JAN. 22nd. Better than at last report. The colour of the urine is not of so deep a hue as before. His daily allowance of bread has been increased, and he is taking the following mixture:—

Rx. Quiniaz sulph. gr. viij;
Acid sulphuric dilut. 3j;
Infus rosæ co. ʒ viij.
M. Capt. coh. ij. ter die.

28th. His health daily improves; he is allowed to go out for about four hours in the middle of each day, for the sake of fresh air and exercise. The character of the urine continues to improve, although it remains somewhat of a lilac tinge, and continues to deposit the amorphous sediment in a less degree. The quantity passed daily is still about six pints, but of this the by far greater proportion is passed during the night.

Feb. 6th. The general aspect of the patient's countenance is evidently improved, though he still remains feeble and emaciated to a certain extent; he states that he daily gains strength, and that there has been latterly a partial restoration of the virile powers. He has now no remains of pain either in the lumbar or hypogastric regions. The tongue is still flabby and covered with a milky-like fur. The appetite is now so much improved, that he states he could eat far more than he is allowed. The pulse 96, full and

soft. The urine in quantity is as at last report, is rather paler in colour, and continues to deposit the lilac-coloured sediment. It now tinges the litmus-paper more decidedly of a red hue, most probably from the effect of the acid remedy which has been employed.

14th. Was put on "full diet" about the day after the date of last report. At the present time he is not nearly so well as at last report. The lassitude and debility from which he had in a good degree recovered, all now present, as is indicated by the countenance, &c. in almost as great a degree as the period of his admission. The indications afforded by the characters of the urine remain the same.

21st. He remains the same as at last report, and is continuing the same remedies.

24th. Left the hospital to day, in consequence of having the wants of a young family to attend to. He is much the same as at last report, on the whole, not having received much benefit. The urine, when tested with the litmus-paper, still shews an excess of acid.

Phlegmonous Erysipelas.

Hancock, aged 53, was admitted into Northumberland ward, January 18th, as a patient of Mr. Guthrie, having been previously ill eight days. He had an extensive ulcer of the leg, just above the ankle, which having been of very tedious cure, healed about two years ago. About a week or two previous to his admission, he grazed, accidentally, the surface of the old cicatrix of this ulcer, and the sore thus produced being neglected, it became highly inflamed and irritable, and gave rise to the erysipelas for which he was admitted. A spreading and superficial inflammation proceeded up the inner side of the leg and thigh, in the course of the absorbents, whose tissue was evidently inflamed. At the time of his admission, there was a perceptible tendency in two or three places, for the violence of the inflammation to exhaust itself in the formation of matter, and in the course of a few days, several patches of diffuse suppuration had become established in the subcutaneous cellular tissue, pretty much in the course of the absorbents, from the foot to the groin. From the time of his admission, the general symptoms have been those of an asthenic type, and have required a considerable degree of support and stimulation. The treatment ordinarily pursued in such cases was adopted, and the matter which we have spoken of, was liberated by means of incisions of moderate size (on the plan of Mr. C. Hutchinson), very judiciously instituted by Mr. Hancock, as occasion appeared to demand. Notwithstanding the greatest degree of care, symptoms of cerebral crethism appeared a few days since, which seemed at one time to threaten meningitis.

Feb. 3. There is a considerable degree of muttering delirium present; tongue dry, and covered with the brown fur of typhus; teeth and gums covered with sordes; pulse 65, small and feeble.

Mr. Guthrie ordered him to have daily four ounces of port wine, in addition to the same quantity which he has been allowed for several days, and likewise prescribed the following mixture.—

Rx. Quiniaz sulphat., gr. xvj;
Acidi sulphuric. dilut., 3 ij;
Tinct. cinchonæ, comp., 3 iij;
Infusi gentian. comp., 3 v.

Fiat mistura, cujus capiat cochl. duo amplas 4tis horis.

6th. Rather better; pulse 72, but still very feeble. Another incision has been made, to allow the escape of some fresh-formed matter. The leg and thigh are so much relieved, that the application of poultices has been discontinued, and a roller with simple dressings been substituted. There still, however, remains considerable inflammation, with swelling about the ankle, and dorsum of the foot, surrounding the old cicatrix.

7th. Much better; the countenance has lost the sunken features of typhus; the pulse is stronger, and the tongue nearly clean. The inflammatory action in the leg and foot is also nearly subdued.

14th. The patient is decidedly improving rapidly, both as respects the local and general symptoms.

21st. He improves in his general health daily; but yesterday he had an attack of rigors, and the attention of Mr. Snowdon, the present house-surgeon of the hospital, was attracted to a red and inflamed spot, situated over the anterior spinous process of the ilium; this spot possesses a great degree of tension, and it was thought that an indistinct fluctuation could be perceived in it. Mr. Guthrie directed early incisions to be made in all those spots, by which means he observed the subsequent necessity for larger ones would be prevented.

23rd. The inflammation over the ilium has nearly disappeared without any incision having been made. The incisions in the leg are fast filling up with granulations and convalescence appears to be now about established.

Immense Calculus extracted from the Bladder of a Female.

Case of *Mary Kean*, continued from page 127.

Feb. 18th. Going on favourably. Yesterday a large fragment was found to be making its way through the urethra, which Mr. Snowdon removed with the forceps, when it was found to weigh two ounces. several small fragments have continued to pass at intervals.

21st. She is so far recovered, that she has been again removed to her old bed in Queen Ann Ward. She complains of some pain in the bladder; the urine escapes as fast as it enters by the ureters: the urethra, which was divided as a preliminary step to the operation of breaking and extracting the calculus, does not show any tendency to recover its tone at present. The bladder has been injected with warm water, by direction of Mr. Guthrie, but no additional fragments have come away. This he has ordered to be regularly repeated in order to remove the superabundant mucus, which might otherwise afford a nidus for the lodgement of a phosphatic deposition. She takes an anodyne draught every night.

23rd. No further fragments have been passed from the bladder, and it is believed that the whole of this immense calculus has now been completely evacuated.—the weight of the fragments actually collected, and exclusive of what was necessarily lost at various times, amounting to very little short of seven ounces. A considerable quantity of mucus is secreted by the bladder; the general health and appearance improve: pulse is 100 and feeble; in other respects she is much as at last report. She is ordered to take half a pint of decoction of the pareira blava daily.

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MEDICAL APPOINTMENTS AT NEWCASTLE-UPON-TYNE.

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To the Editor of the Original London Medical and Surgical Journal.

Newcastle-upon-Tyne, Feb. 19th. 1835.

SIR—It is exceedingly gratifying to find, that the concluding sentence in my last letter is borne out by so splendid an illustration as that afforded by the medical officers of the Birmingham General Hospital and Dispensary. Who that reads Dr. Johnstones address to the Birmingham school, can question the truth of my statement in regard to our medical institutions when compared with those of other provincial towns? and who will attempt to deny that such medical institutions stand out in bold and strong relief from the ground presented by our institutions? Let the governors, let the medical officers, and let the scientific public of Newcastle contemplate the picture, and we shall ere long find either that the medical officers have roused from their lethargy, or that the governors who appointed them to their honourable and responsible situations, will be convinced, that the establishments which they direct with their judgment, and support by pecuniary contribution, may be materially extended in utility. A nobler instance of professional liberality, or of anxiety to advance medical

science, never characterised any set of men, than that which the history of the Birmingham school of medicine (as given by Dr. Johnstone) presents. It would be well for society and still better for the medical portion of it, if such feelings were more generally entertained, as those must have been, which could lead men to merge all private and personal considerations for the advancement of a common cause, like that of the diffusion of medical science and the public welfare.

I now come to the consideration of a question already mooted by me, viz. the "expediency of appointments for life." In my first letter, I stated my conviction, that the operation of this system was decidedly prejudicial both to the advancement of medical knowledge, and to the institutions in which it existed. That this opinion may be questioned by some, I have no doubt; in this respect, however, it only resembles everything which does not admit of actual demonstration. I hope in the following observations to succeed in shewing that my opinion is not a mere matter of speculation, and I also wish to be understood as (for a time at least) quitting Newcastle, and treating the question on perfectly general grounds. What, then, it may be asked, are the real or supposed disadvantages of life appointments to public medical institutions? 1st. Where this system prevails, it renders the establishments subservient to the interests of individuals, rather than to the promotion of the welfare of those for whose relief from suffering they were originally formed. 2dly. It gives undue advantages of acquiring and perfecting professional knowledge, to a few, at the expense of utterly excluding others of equal merit, from a participation in these advantages—and in this way prevents, instead of securing, a constant supply of experienced and practical men to society. 3dly. By placing those appointed beyond all public competition, it effectually exterminates that spirit of emulation, which is not only essential to a zealous discharge of duty, but when absent, opposes one of the most insuperable obstacles to the advancement of medical science. It is calculated to promote indolence instead of activity, in those who have probably attained the height of their ambition—who feel themselves secure against all encroachment—and it too often damps the ardour of those who see only a remote chance of succeeding to similar honours. 4thly. As men often grow old in mind, even prior to the time when bodily infirmities render them aware of it, it is plain that the continuance of such persons in office, is a serious evil to the hospitals and their inmates. 5thly. It fosters feelings of envy and jealousy, instead of honourable rivalry amongst the members of the profession, and in many instances render those who know not how to enjoy their good

fortune, odious and contemptible in the estimation of persons who ought rather to look up to them as placed in a situation to which they are entitled by their talents, and to which they themselves, in time, might also aspire. If I were disposed to enter into speculations upon this subject, I might add materially to the above list of evils, but as I have myself seen those enumerated in full operation, I shall not weaken the arguments against life appointments by calling to my aid other imaginary or unproved evils. It now becomes a question, how these disadvantages may be avoided? In answer to this, I would recommend the appointments of Physicians and Surgeons to hospitals and dispensaries to be for a term of years (three or five), and by allowing of their re-election after a certain time had elapsed, it would not only extend the utility of the institutions, but would also prevent the semblance of injustice to those who had served them. It is to be remembered that most hospital appointments are altogether honorary, and consequently no real injury is sustained by the parties who for a time only become disqualified. If however this plan be deemed objectionable, there is another to which I certainly give the preference, especially when an institution has a plurality of officers. Let us for example suppose the hospital to have four physicians and four surgeons, and in addition to these two assistant physicians and two assistant surgeons, that the term of these appointments is three years; I would propose that at the expiration of that time, the two seniors in each department should be elevated to the rank of consulting officers, the two juniors succeed them as senior officers, and that the place of the latter should be filled by the assistant officers, two new assistants being at the same time elected. At the end of the next three years the two consulting officers go out, and the vacancies are to be filled up in the manner above described. The advantage of this system is, that it ensures the qualifications of every officer for the duties of his office. It extends the advantage of the hospital to a large proportion of the profession, and in this way also confers upon society a numerous class of well educated and experienced practitioners. If such a system were adopted, it is obvious that the shortest term that a man would be in office would be six years, a period which would not only afford him the opportunity of extensive practice, but also enable him to display his talents, and establish a professional reputation, which is the first object with every member of the profession. If on the contrary his abilities be below par, the institution would labour under a temporary instead of a permanent evil, which consideration alone should be to the governors of public medical charities a sufficient ground for adopting either this

or some similar arrangement. I shall now take my leave of the infirmary—and subscribe myself

Your obedient servant

GEORGE FIFE, M. D.

P. S. In my next I shall proceed to make some observations on the dispensary.

MEETING AT THE COLLEGE OF PHYSICIANS.

THE second meeting for the season took place at the College of Physicians on the 23rd inst., when a large assemblage was present. A paper was read from Dr. Hope, on apoplexy caused by diseases of the heart, and another from Dr. Veitch, on the prevalence of cholera in marshy districts.

Carbonate of Soda Lozenges.

M. Beral gives the following as the formula of these lozenges, which have also the aliases of "Digestive Pastilles of d'Arcet," and "Pastilles of Vichy":—

Powdered sugar..... 34 ounces,
Powdered bi-carbonate of soda 2 ounces,
Mucilage of gum-arabic..... 36 drachms.

Mix the bicarbonate and sugar well; add the mucilage in the quantity prescribed, or as may be needed, and make a paste of it: roll it out and divide it into lozenges of 18 grains each. Each lozenge contains a grain of bicarbonate of soda.

The lozenges may be made with rose-scented mucilage, with orange, peppermint, chocolate, or tolu or iris-root.

The rose and orange mucilages alluded to, are made by dissolving one part of the gum in three of rose or orange flower water.

By mixing eight drachms of tincture of tolu with eight ounces of sugar, and using a proportion of this in the manufacture of the soda lozenges, the flavour and properties of tolu accompany the latter. With iris-root a very pleasing scent is given to the breath.—*Journal de Pharmacie*, Feb. 1835.

CORRESPONDENTS.

Communications have been received from Dr. Fyfe, of Newcastle-upon-Tyne—Dr. Jacob, of Maryborough—Mr. Williams, of Gosport—Democritus—Dr. Corrigan, of Dublin—A Dublin Friend—A Lover of Fair Play—Guyensis—and a Member of the Medico-Botanical Society; all of which will receive our earliest attention.

J. O. B.—Many thanks for the recommendation.

An Irish Subscriber.—This Journal is forwarded with the *Lancet* and *Medical Gazette*, and reaches Dublin with them every Monday morning. The remedy for not receiving it is to change from the person who does not supply it regularly; this will soon bring him to his senses.

Dr. Corrigan's Clinical Lectures, delivered at the Jervis-street Hospital, are now commenced, and will be regularly continued. We also expect his lectures on Auscultation and Diseases of the Chest. He is the best stethoscopist in Dublin.

An Inquirer.—We cannot inform our Correspondent when the prizes will be awarded by the Medical Reform Society—Dr. Epps's address is 89, Great Russell-street, Bloomsbury-square.

Mr. Cooke, of Northampton.—The communication has been received.

WEEKLY METEOROLOGICAL JOURNAL.

1835.	Moon.	Thermom.			Barometer.		De Luc's Hygrometer		Winds.		Atmospheric Variations.		
Feb.													
19	O	44	49	39	29.21	29.91	57	58	S.W.	S. Varia.	Cloudy	Fine	Rain
20		39	47	35	29.99	28.91	58	57	S.W.	S.S.E.	Fine	Rain	—
21		36	47	36	29.02	29.23	57	56	S.W.	S.S.W.	—	Fine	Fine
22		41	49	42	29.51	29.42	56	57	S.W.	S.W.	—	—	—
23		44	50	31	29.97	29.37	57	52	S.W.	W.	Rain	—	—
24		37	48	37	29.51	29.64	52	56	S.W.	W.S.W.	Fine	Showry	Cloudy
25		45	50	43	29.37	29.15	56	59	S.	S.	Cloudy	Rain	Rain

50, High Holborn.

WILLIAM HARRIS and Co.

All communications and books for review are to be addressed (post paid) to Dr. Ryan, 4, Great Queen-street, St. James's Park, Westminster; or to G. Henderson, 2, Old Bailey, Ludgate-hill.

Advertisements should be forwarded before the afternoon of Thursday; all books for review on Wednesday; and all communications on Monday, if intended to appear in the ensuing number.

London Medical and Surgical Journal.

No. 162.

SATURDAY, MARCH 7, 1835.

VOL. VII.

LECTURES

ON

MEDICAL JURISPRUDENCE,

DELIVERED BY PROFESSOR A. T. THOMSON,
F. L. S.,*At the University of London; Session 1834-35.*

LECTURE XX.

Mental Alienation.

GENTLEMEN—The subject to which I have now to direct your attention, Mental Alienation, is the most interesting in the range of our inquiries, involving questions respecting the immortal part of our being, which have hitherto been, and perhaps ever shall be, covered by a veil of mystery, impenetrable in this temporary stage of our existence. It is impossible, in such an inquiry, not to deviate into the labyrinths of metaphysics; but, if we are forced to step into these, let us take common sense with us, like the thread of Ariadne, to guide us back from their devious mazes.

It has been well remarked, "that the attempt to define the nature of mind or soul is as vain and presumptuous an undertaking as it is to try to find out, by thought alone, the nature of the Almighty." Yet (such is the vanity of man), this arduous task has not only been attempted, but some speculative philosophers have decided that *mind* and *brain* are equally substantial and the same. "Continuing to reflect," says Dr. Priestley, in his celebrated work on Matter and Spirit. "upon the subject, I became satisfied that if we suffer ourselves to be guided in our inquiries by the universally acknowledged rules of philosophizing, we shall find ourselves unauthorized to admit anything in man besides that body which is the object of our senses." Others have asserted, that, although both are matter, yet that they are not the same kind of matter. Let us examine briefly the grounds upon which these hypotheses have been erected.

The first of the arguments which have been advanced to prove the materiality of mind is that we have never found the phenomena of perception unconnected with organized masses of matter; they may, there-

fore, be regarded as qualities of such substances; for it is no objection to affirm, what may be said of all the other qualities with which we know matter to be endowed, that they have no resemblance nor affinity to the more acknowledged primary qualities of matter. It is contended, therefore, that mind is always found in conjunction with a certain mass of solid and extended matter; that it inhabits the same portion of space, and presents itself invariably along with those other qualities, the assemblage of which makes up our idea of organized matter. "In fact," says Dr. Priestley, "there is just the same reason to conclude that the powers of sensation and thought are the necessary result of a particular organization, as that sound is the necessary result of particular concussion of the air; for in both cases the one constantly accompanies the other; and there is not in nature a stronger argument for a necessary connexion, or any cause and any effect." I will not at present stop to refute this hypothesis, which is contradicted by a multiplicity of unquestionable facts, which Dr. Priestley could not be ignorant of, but over which he has certainly thrown the veil of neglect, in support of the pride of opinion. We are informed by Dr. Hartley, that *perception* is merely a peculiar species of motion, because it is produced by certain mechanical impulses on the extremities of nerves, which transmit it to the brain, and that association is strictly within the analogy of material movement, and something like the vibration of musical cords in juxtaposition. Let us examine this assertion.

By what means do we perceive the qualities of matter? One reply only can be offered—by perception. Does it not, therefore, involve an absurdity to affirm, that that faculty which informs us of the qualities of matter, is itself a quality of matter? If this were true, perception would also be perceived, which is not the case: it is not a quality, but the knowledge of qualities, and certainly distinct from that which is perceived by it. Thence it must be admitted that it is an unwarrantable abuse of language to call *perception* a quality, which is not an object of sense, as all qualities are; which is never conceived to occupy space,

nor to characterise it, nor is endowed with perceptible properties; which cannot be supposed to be an inseparable attribute of matter, and is found in connexion with organized matter, only whilst that matter exists in a certain state, or is alive. If there were no other grounds for rejecting the materialism of mind, this surely is sufficient, that it confounds the act of perception with the qualities perceived, and classes among the objects of perception the faculty by which a knowledge of these objects can only be attained, and which must be exercised before we can possess any conception, "either of matter or its qualities."

What does anatomy say on this subject? If we look into the writings of Morgagni, or those of Bonetus, of Haller, and of others less distinguished, but equally correct, we find that the texture of every part of the brain may be morbidly altered from its natural state, and yet all the faculties of the mind remain entire. Abscesses have been formed in the brain; tumours have been found in it, which have slowly enlarged and hardened; its arteries have been ossified; indeed, every portion of it, in different instances, have exhibited morbid alterations of structure, and yet the mind has remained entire. Even when it has suffered in the exercise of its faculties, either from general or local inflammation, as soon as this diseased action has subsided, although it may leave behind it some organic mischief, this may continue for many years without affecting permanently the faculties of the mind. Equally strong proofs might also be quoted, that the faculties of mind do not decay, as has been *boldly* asserted, as the body grows old and infirm; for when the mental faculties have been properly cultivated and exercised, the mind shines forth in all its pristine vigour, at the very moment when the body is sinking into the grave. What is the inference to be drawn from this? Can it be other than that mind is perfectly distinct from the *material substance* which enters into our corporeal frame? Give an example, it may be said. The only difficulty is in the selection—"Quid jurisconsulti?" says Cicero, in his defence of old age, and in proof of the fact, that if study be not abandoned, the mind continues vigorous to the last; "Quid jurisconsulti? quid pontifices? quid philosophi senes? quam multa meminerint! Manent ingenia senibus, modo permanent studium, et industria; nec ea solum in claris et honoratis viris, sed in vita etiam privata et quieta." Did not Sophocles write tragedies of an immortal stamp in extreme old age? Did the mind of Voltaire decay with the wasting of his frame? Did the brilliant intellect of Burke melt down with his bodily structure? On the contrary, do we not find, in the last publication of Burke, all the vigour of thought, the vividness of imagination, and the splendour of language

which characterise the compositions of the meridian of his life? What can be found of decay in the productions of the last days of Bishop Burnet, stretched on the rack by the tortures of stone, and a complication of maladies? or in those of Samuel Johnson, whose whole life was one paroxysm of disease? Did the mind of Newton share the weakness of his body, when, in his eightieth year, he resolved the celebrated problem of trajectories of Leibnitz, as an evening's amusement? and, finally, in our own time, what dependence of mind on body was seen in the closing hours of the life of Wollaston, who exercised his mental faculties when his body had almost become extinct. "Nullum sæva caput Proserpina fugit"—but mind remains untouched.

It has, nevertheless, been contended, as I have said, that, although it were admitted that brain and mind are distinct, still this is no proof that mind is not material. I admit the force of this reasoning. Many of the external phenomena of the mind may be accounted for on the known influence of mechanical and chemical powers operating on irritability and sensibility, or, in other words, on the nervous energy. But, although the transmission of such impressions to the brain can be readily accounted for, yet the thought which is produced, the idea which arises, cannot be accounted for: the belief that it is the result of an immaterial agent, forces itself upon the mind: it is a matter of faith, not of reason. We know nothing more of it than what Revelation has taught us, and beyond this it is probable we shall never advance. The connection, however, between the material agent by which a knowledge of external objects is communicated to the mind, and the mind itself, is so close, that it is evident the one cannot be affected without the other suffering: a diseased state, therefore, of the brain may produce insanity, but it is not a necessary consequence; and individuals have died in a state of insanity, the examination of whose brains has not displayed any obvious change to which the disease could be attributed.

I have thought it necessary, Gentlemen, to make these brief remarks on the connection between mind and body, that, being aware of my conviction of the immateriality of mind, I may not be misunderstood in some of the details which I must necessarily bring before you in pursuing this part of our inquiries. But it may be justly demanded—To what useful or practical conclusions does it lead us? In my opinion, it is one of the utmost importance. If we regard mind, or all mental phenomena as affections of the soul, and the functions of the brain and nerves as merely instrumental processes, we shall be led to admit that two species of insanity may exist, or at least differ in their origin; one a malady purely of the mind, the other a malady originating

in the material organs, the brain and nervous system, either primarily affected, or sympathizing with some lesion or functional disorder in one or more of the vital organs. In regarding the first form of insanity, in medico-legal inquiries, our investigation must be strictly in reference to mental causes, such as various passions of the mind, loss of friends, shame, sudden terror, remorse, religious enthusiasm, and such like; in investigating the second, the state of the corporeal health must be strictly inquired into, as the probability of recovery may depend solely upon correcting the functional disorders affecting the nervous system; for, if such a discrimination be essential in a curative point of view, it is also of the highest importance in determining legal questions connected with insanity.

Insanity, in all its forms, frequently becomes an object of legal investigation, and necessarily involving medical evidence. No man who is of insane mind is an accountable being. "It is the reason of man," to use the language of Lord Erskine, "which makes him accountable for his actions; and the deprivation of reason acquits him of crime;"—"it annuls a man's dominion over property, it dissolves his contracts and other acts, which otherwise would be binding, and it takes away his responsibility for crimes." "Non compos mentis," says Lord Coke, "is of three kinds: 1st. *idiotia*, which from his nativity, by a perpetual infirmity, is non compos mentis: 2ndly. he that by sickness, grief, or other accident, wholly loses his memory and understanding: 3rdly. a lunatic that sometimes has understanding, and sometimes not, *aliquando gaudet lucidis intervallis*; and therefore he is called non compos as long as he hath not understanding." It is further justly said, that there is a partial insanity, and a total insanity: the former does not excuse a person for committing crimes of a capital nature; the latter places him without all responsibility. But this latter condition must be accurately defined, and I will employ here again the words of that distinguished counsel, whose remark on the accountable nature of man I have already quoted. "He alone," says Lord Erskine, "can be so emancipated, whose disease, call it what you will, consists, not merely in seeing with a prejudiced eye, or with odd and absurd peculiarities, differing, in many respects, from the contemplations of sober sense, upon the actual existence of things, but he only whose reasoning and corresponding conduct, though governed by the ordinary dictates of reason, proceed upon something which has no foundation or existence." Now, such being the case, who is to decide, who to determine this state, except the physician? For example, the property of all lunatics—or, in the language of the law, those non compos mentis—is placed in the guardianship of the crown; or rather, the Lord Chancellor is the trustee of

the crown for the preservation of the property of the lunatic, until he be restored to reason. The importance, therefore, of obtaining a sound decision is obvious; and the physician is usually called upon for this purpose, both as refers to the deprivation and the recovery of sanity. Again, by an act of the 15th George 2nd., cap. 30, the marriages of all persons are annulled, who, after being found lunatics on inquisition by commission under the great seal, or after being committed to the care of trustees by act of parliament, shall marry without the Chancellor's declaring them of sane mind*."

If we inquire what the criminal statutes say on this head, we find that in acts of felony, "the wrongs of a madman shall not be imputed to him, for that in those cases, *actus non facit reum nisi mens sit rea*, and he is *amens*, id est, *sine mente*, without his mind or discretion; and a madman is only punished by his madness†." Who, then, I again inquire, is to determine the existence of this state? Certainly, it can be determined only by the physician. A person who is insane may discover to ordinary observers no symptom whatever of his disorder; his whole conduct may be marked by ability and composure; yet he may be under a delusion, which impels him to commit certain acts for which, undoubtedly, he cannot be regarded as legally responsible. To illustrate this remark by an example, let us take an incident in the life of Hatfield, who was tried for shooting at George 3rd., in Drury Lane Theatre, in 1800. That unfortunate man had a child eight months old, of which he was most passionately fond. On the day on which he attempted the life of the king, he went to the bed-side of the mother, who had the infant in her arms, and whilst the tears of affection for his offspring ran down his face, he seized and endeavoured to dash out its brains against the wall, but, happily, the child was rescued. This man was perfectly conscious that he was the husband of the woman, and the father of the child; he knew that it was criminal to perform the act which he contemplated; but he acted "under the overruling dominion of a morbid imagination, and conceived that he was acting against the dictates of nature, in obedience to the superior command of Heaven, which had told him, that the moment he was dead, and the infant with him, all nature was to be changed, and all mankind were to be redeemed by his dissolution." When such thoughts were not present in the mind of this unfortunate man, all his acts were those of a rational being. Now, who can sift and determine this state of mind, especially when it is connected with, as in Hatfield's case, and dependent upon, injury to the

* Coke on Lyttleton—Hargrave's notes, 80, a. n. 1.

† Ibid, 247, b. n. 2.

brain, from wounds inflicted upon the head: or, when it is the consequence of hereditary taint, which is too often the case, if it is not the physician? Now, what is the inference to be deducted from these facts? It is this, that as the medical practitioner is called upon to determine the existence of insanity, and he must state his reasons for any opinion which he may advance upon the case, the necessity for a familiar acquaintance with the pathology of the disease is very obvious. He must have a correct notion of sound mind, and know the limits of insanity so intimately, as not to confound with it diseases which resemble it in some points, but under which a man is fully capable of managing his affairs, is a responsible agent, and displays that regularity in conduct which entitles him to maintain, unmolested, his place in society. It may be supposed that these points might be more readily determined by individuals not of the medical profession, who have opportunities of knowing the habits, and observing the ordinary conduct of the supposed madman, than a physician can enjoy. But this is a loose mode of reasoning: the opinions of ordinary observers, and those not of the medical profession, are seldom correct. From want of opportunities of seeing the disease in its various forms, the opinions of the majority of mankind regarding insanity are so vague and extravagant as to mislead them, unless the disease display itself in *violence* and *turbulence* of conduct: and frequently eccentricities are mistaken for insanity, which would lead to the most distressing consequences, if measures to confine individuals were permitted to be taken upon such evidence. One of the most striking features of insanity to the experienced is wholly overlooked by those unaccustomed to contemplate the disease: I refer to the cautious manner in which real madmen often evade the point upon which their madness hinges; and, unless the individual who is in conversation with a madman leads him to the point (a circumstance which is seldom attempted), except by the physician, his insanity is not apparent, and he is pronounced sane. On the contrary, this "*stifling the disorder*," being known to the medical examiner, the conversation is frequently changed; and the decision should not be pronounced until many opportunities are afforded to ascertain its correctness. Lord Erskine, in defending Hatfield, mentioned, in his celebrated speech on that occasion, a very striking instance of the cunning with which madmen sometimes stifle their disorder. Lord Erskine had wasted a whole day in a vain endeavour to demonstrate to the judge and jury the insanity of an unfortunate gentleman, who had brought an action against his brother and the keeper of a madhouse for confining him in a madhouse, when he asserted his perfect sanity. He replied so well to Lord Erskine's queries,

that the judge, the jury, and the audience, believed that he was sane, and the victim of wanton oppression. At length Dr. Sims came into court, and suggested to Lord Erskine to inquire whether he did not believe himself to be *Jesus Christ*. Lord Erskine took the hint, and pretended to lament his ignorance, and the indecency of his examination: the poor gentleman expressed his forgiveness; and, with the utmost gravity, in the face of the whole court, emphatically exclaimed, *I am the Christ*. It is unnecessary to say how the cause ended. Another case, mentioned by the same eloquent lawyer in the same trial, also deserves to be mentioned. (Howel's State Trials, vol. 27, p. 1318). In examining, therefore, a suspected madman, we ought to be certain that we fully comprehend the character of *sound mind*. And here, Gentlemen, I cannot avoid lamenting how little attention is bestowed by those who are entering our profession, on the study of what is termed the *philosophy*, but which I would designate the *physiology* and *pathology* of the human mind. It is the deficiency of this species of knowledge which permits the shadows of insanity imperceptibly to lengthen, till the whole darkness of its night settles upon the understanding. On the contrary, it is by an acquaintance with the philosophy of mind that the practical physician is enabled to measure the power which the mind of his patient possesses over the train of his thoughts, and by detecting any aberration from its usual or healthful state, to take the earliest means to counteract a tendency to insanity; or, if the disease already exist, to distinguish between those intermissions which constitute lucid intervals, and the termination of the malady.

But, to return to the subject immediately before us, it may be reasonably demanded, What are the indications of a sound mind? The best reply, perhaps, is, that they are the reverse of those of insanity: it is too general and loose a definition to say, that a man whose "conduct is regular and whose observations are pertinent," is in his senses; such states, as you have already heard, are often observed in the lucid intervals of insanity, whilst yet the disease is progressing, and whilst even it actually exists. This remark is beautifully illustrated in a case mentioned by Cervantes, in his preface to Don Quixote.

(Here the Professor related the story of the madman who thought that he was Jupiter, and yet was sane on every other point).

Without, therefore, endeavouring to give you a definition or description of *sanity*, I shall leave you to form your idea of it from a knowledge of the symptoms of the opposite state; but, before detailing these, I will point out to you the characteristics of those maladies which approach so closely upon insanity, that they may be mistaken for it.

In all of these, a certain degree of mental alienation may exist; yet not sufficient to deprive the patient of his liberty, or of the management, to a limited extent, of his own affairs. Among these I have not placed the delirium of ordinary fever and phrenitis; for although the actions of those labouring under the delirium of these diseases are to be regarded, as far as requires coercive restraint, in the same manner as those of the furious maniac, yet there is little chance of the two states being confounded.

The first of the diseased states likely to be mistaken for real insanity is hypochondriasis. This is truly a bodily disease in which the nervous system is greatly deranged, and that chiefly owing to a dyspeptic state of habit, often connected with intense application to some particular course of study of a sedentary nature; and, consequently, it is a frequent disease of literary and scientific men. The distinction which Dr. Cullen draws between it and insanity is so admirable, and so correct, that it would be idle in me to attempt to improve upon it; and, therefore, I will quote it to you in his own words. Before doing so, however, I will remark that one thing may direct us in forming a diagnosis, which requires no discrimination to discover—I mean the age of the patient—hypochondriasm seldom making its attack until after the middle period or prime of life, whereas, melancholic mania generally appears before that period. “Hypochondriasis,” says Cullen, “I would consider as being always attended with dyspeptic symptoms; and though there may be, at the same time, an anxious melancholic fear arising from these symptoms, yet, while this fear is only a mistaken judgment with respect to the state of the person’s own health, and to the danger to be thence apprehended, I would still consider the disease as hypochondriasis, and as distinct from the proper melancholia. But when an anxious fear and despondency arise from a mistaken judgment with respect to other circumstances than those of health, and more especially when the person is at the same time without any dyspeptic symptoms, every one will readily allow this to be a disease widely different from both dyspepsia and hypochondriasis.” The truth of this distinction must be admitted by every one who has ever seen the two diseases. The flatulences, the acid eructations, the discharge of pale urine, vertigo, palpitations, and the inability to engage in any thing requiring vigour or courage, distinguish hypochondriasis as far as regards corporeal symptoms. As far as regards the mental feelings, one of the most striking features which distinguish hypochondriasis from insanity is, that the erroneous ideas which the hypochondriac conceives generally concerns his health, or the state of his bodily frame; whereas in melancholia, they consist of various phenomena of grief, despondency, and despair. The dread of death often over-

shadows the mind of the hypochondriac; and it is this morbid apprehension which embitters his life; yet, “he prefers the rack upon which he is stretched, to the repose of the grave.” When he becomes indifferent to his fate, then the applications of art powerfully aid the operations of Nature, and he is restored to that health which he in vain sighed for, when the inordinate fear of death constantly haunts his imagination. When remorse becomes a feature of this disease, and there is a disposition in the patient to calumniate himself for some fancied error, to consider as misconduct, that which is merely mischance; in this state of the mind, hypochondriasm amalgamates, as it were, with insanity, and frequently terminates in it. This is often merely the consequence of a dyspeptic state of the digestive organs, brought on by too close application to one course of study; the imbecility of mind which it produces becomes perceptible to the hypochondriac; he supposes that it has arisen from lost opportunities of improvement: he shuns society, if a literary man; he pores over his books, yet finds he gains nothing:—fancies that he knows nothing, and falls into despair—the depressed state of the mind deranges the entire functions of the nervous system, and insanity is the result.

Another distinguishing feature of hypochondriasis is pointed out by Foderè, connected with the selfish feelings which predominate. The hypochondriac is credulous, variable, and timid; the melancholic madman is reserved and prudent, but neither devoid of courage, nor incapable of generous and noble sentiments. The hypochondriac, from being able to reason more accurately on the nature of good and evil, may talk of suicide; but, unless the disease changes its character and slides into insanity, he never accomplishes the act. In another point of view also, the hypochondriac differs widely from the madman; his feelings and affections are in a natural state; those of the madman in every form of insanity are in an unnatural and perverted state, and form the most characteristic features of the disease.

Hypochondriasm, however, is often attended by illusions closely bordering on hallucination; and when these occur it is difficult to distinguish this disease from insanity. I do not here refer to the whims and caprices of the hypochondriac, so well and ludicrously described by Pope:—

“Here living tea-pots stand, one arm held out,
One bent; the handle thfs, and that the spout;
A pipkin there, like Homer’s tripod walks,
Here sighs a jar, and there a goose-pye talks;
Men prove with child, as powerful fancy works,
And maids, turn’d bottles, call aloud for corks.”

Such fancies as these do not belong to

hallucination, which consists in an idea embodied by the imagination, and so associated with the ordinary affairs of life as to be constantly reproduced by the memory. A beautiful illustration of this symptom of hypochondriasm is found in the interesting story of the celebrated Nicolai of Berlin, drawn up by himself; it is too long to read to you:—you will find it either in Ferrier on Apparitions, or in Haslam's pamphlet on Medical Jurisprudence, as it relates to insanity.

Nicolai, who was a man of letters, and possessed of great talents, was all along conscious that the spectral forms which haunted him were delusions, otherwise the disease certainly would have been correctly regarded as insanity. I cannot refrain from relating to you a very curious instance of hallucination related by Sir Walter Scott in his Letters on Demonology. (The professor here related the story of the phantom). Notwithstanding the continued illusion in this case, there was no insanity; the hypochondriac had no belief in the reality of the spectral form which haunted him; if such had been the case, his disorder would no longer have been hypochondriasis but true insanity. Thus, in the case of the Baker of Ferrari, recorded by Donatus, who believed that he was made of butter, and on that account would not approach the oven lest he should melt, the disease was no longer hypochondriasm but true insanity. These illusions depend both on corporeal and mental causes; when they proceed from the former, the health of the brain remains entire: the patient is a reasonable man in all other respects; when from the latter, the brain is always disordered, either by the unequal exercise of it, or hereditary predisposition. Thence, the difficulty in distinguishing between hypochondriasm and insanity, when hallucinations are present (for they occur in both), is certainly great; but in one thing they differ: the hypochondriac does not believe in their reality;—they are in general only transient, whereas in insanity, they are not only permanent and fixed, but there is, also, a rooted conviction of their reality—an implicit belief in the delusion. But notwithstanding this test, many cases have been correctly recorded as instances of hypochondriasm which should apparently have stood as cases of insanity; as a proof of which I shall mention a case related by Marcus Donatus, of one Vicentinus, who imagined that he was of such an enormous size that he could not go through the door of his apartment. He was led forcibly through it, and believed that, in the passage, the flesh was torn from his bones, and that his limbs were broken off. In a few days he died of this impression, accusing those who had conducted him of being his murderers. Now, in this instance, the erroneous idea of his size was truly hypochondriacal; and, yet it is difficult to con-

ceive, that the conviction of the effects of forcing him through the passage, could have been so deeply rooted in a sane mind. This, however, is a rare case, and attention to the circumstances which I have pointed out, generally will enable the practitioner to discriminate between *hypochondriasm* and *insanity*.

Epilepsy is often connected with insanity, and it may be mistaken for it. It is a disease which, when connate, terminates in dementia; and even when symptomatic, weakens the memory and impairs judgment; but, in many instances, it is totally free from every symptom of insanity, and, consequently, ought to be carefully distinguished from it. It is, however, in long continued epilepsy only, when, from the repetition of the attacks, the powers of the brain, the intellect, and the memory, are so weakened, that the physiognomy of the countenance seems to anticipate the termination in either mania or idiotcy, that it is likely to be mistaken for dementia.

Intoxication produces effects closely resembling those of insanity. After a certain quantity of wine or any strong liquor has been swallowed, a state of real delirium ensues:—"the person talks idly and unreasonably; vociferates loudly; speaks in broken and incoherent language; emits screams; swears alternately; and has no command over his actions. In this case, there is an evident determination to the brain; and the symptoms closely resemble those of a paroxysm of phrenitic mania. But, although it must be admitted that those who are labouring under delirium, from whatever cause, differ, at the time, from those of sound mind, inasmuch as they firmly believe the diseased perceptions and notions which are passing through their mind, and adopt them as motives of actions and expressions at variance with those of reasonable men, yet this is not sufficient to authorise their confinement in a lunatic asylum. It is true that, when intoxication becomes habitual, it is not an unfrequent cause of insanity, and even of furious mania: but in the early stages of these cases, if the exciting cause be withheld and the convalescence is so far advanced, that the patient is capable of receiving sustenance from the ordinary articles of diet, the natural vigour both of body and mind return: and when this occurs it then becomes a criminal act to detain the objects of them longer in confinement; although the almost invariable consequence of such an enlargement is a return to those habits which produced the temporary aberration of judgment. After a few accessions, if the disease do not terminate in epilepsy or death, it produces a state of confirmed fatuity. In granting certificates for the confinement of such individuals, we must be careful that the habit is proceeding so far as to threaten to render the alienation permanent: the conduct

the individual, during the intervals of temperance, must be particularly inquired into, as it is only upon such data that we can judge of the state of mind, and safely and justly authorize the restraint of confinement. In law this species of insanity is termed *dementia affectata*; and there is a particular reference to the causes of it, in the liability of the person for the commission of any crime during its continuance. (See Russell, vol. 1. pp. 7, 8).

The peculiar aspect of the individual, an expression of countenance which cannot readily be described, but which is acknowledged, at first sight, points out the cause of this state of temporary insanity; and, therefore, until it is found that measures taken to restrain the repetition of this fascinating vice are wholly ineffectual, we cannot consider ourselves authorized to place the wretched victims within a lunatic asylum. If we are called to see the patient during the paroxysm, it is impossible to judge between it and that of furious mania, as it is never inferior to this in violence; but it is generally of much shorter duration. If, independent of the history of the case, we observe the diagnostic aspect which I have mentioned, caution at least is requisite in granting a certificate for the confinement of the person. In Scotland, a man who has become an habitual drunkard, and has lost all control over his inclination, has the power of placing himself under trustees, who have the complete control over all his transactions, and can alone give them validity. This is termed *inhibiting one's self*. In some of its effects, habitual intoxication causes a state of the brain closely allied in every respect to insanity; I refer to that affection which is termed *delirium tremens*. The hallucinations attending this disease are exactly those of insanity, and are as sincerely believed: the patient sometimes believes that he is beset by assassins; and instances have occurred in which the efforts to ward off their supposed violence have overpowered the strength of the unfortunate individual, and suddenly terminated in death. When the delirium is completely established, the same watchfulness occurs as in insanity, and the countenance assumes an aspect of extreme anxiety. Indeed, were it not for the tremors of the hands and tongue, the working of the tendons of the wrists, the absence of malignity in his vehemence, and the knowledge of the previous habits of the patient, the diagnosis would be most difficult between a paroxysm of delirium tremens, and mania. I have frequently authorized the temporary confinement of the insane from drunkenness; and as frequently have witnessed its beneficial influence: but in no instance do I recollect of its having produced a permanent cure. When the habit becomes confirmed, there is rather a decline of intellect than positive derangement; no aid, in this case,

can be derived from medicine; the case may be considered hopeless; the patient is exactly in the state of any other insane person, as far as regards the management of his affairs, or his power of making any legal testamentary document.

Hysteria displays itself most commonly in mobile and irritable temperaments; it occurs most frequently at that period of life when irritability is at the height; and not unfrequently is the result of mental emotions. It is unnecessary to describe the entire hysteric paroxysm; but it resembles insanity in many points. Thus it is accompanied with watchfulness, or disturbed sleep, terrible dreams, perverse conceits and opinions, dejection of mind, discontent, and preposterous judgment. There is often something like *tædium vitæ*: the persons thus affected weep, tremble, despond, and are out of all hope, seek solitude, and preserve a foolish kind of bashfulness. "They indulge," says Sydenham in his masterly description of hypochondriacal hysteria, "terror, anger, jealousy, distrust, and other hateful passions; and abhor joy, and hope, and cheerfulness, which, if they accidentally arise, as they seldom do, quickly fly away, and yet disturb the mind as much as the depressing passions do; so that they observe no mean in any thing, and are constant only to inconstancy. They love the same persons extravagantly at one time, and soon after hate them without a cause; this instant they propose doing one thing, and the next change their mind, and enter upon something contrary to it; so unsettled is their mind that they are never at rest." This painting is true to nature, as the occasional portrait of the hysterical mind. When called to a case of this kind, the medical practitioner ought to enquire minutely into the private history of the individual, and every collateral circumstance connected with her family; whether this be her first, or second, or third attack; whether insanity had prevailed in the family; whether any injury of the head had happened; whether there is any suppression of the catamenia or other customary evacuations; and the state of the mind as to grief, anxiety, or disappointment.

I have witnessed cases of high delirium in hysteria, which so closely resembled insanity; that, unless I had been witness to the whole progress of the attacks, I must have set this down as paroxysms of furious mania. The females were women of good families and education, and correct moral feelings; yet the delicacy of their sex was completely set aside; and the language employed, during their ravings, such as would have disgraced the most abandoned and lost of their sex. In such cases, inflammation of the substance of the brain is present; and the derangement of the intellectual functions can only be attributed to it: but, if we venture to theorize on the disease, it is

difficult to say whether the morbid appearances thus observed in the brain, on post mortem examinations, be the cause or the consequence of the attending insanity, which certainly in these cases accompanies the hysterical paroxysm. I will not, in this place, venture to give an opinion upon this subject; it is sufficient for me to point out the necessity of distinguishing between these temporary aberrations of reason, which subside whenever the disease to which they are adjuncts yield to remedies, and permanent insanity, which they simulate. In a medico-legal point of view, this is a matter of the utmost importance; and nothing would lower medical character so greatly as to send into confinement, as a furious maniac, an individual labouring under a paroxysm of *hysteria*.

If *hypochondriasis* may be confounded with, and be mistaken for insanity, that disease which has been termed *nostalgia* is much more likely to be so; and where this occurs, and confinement in a lunatic asylum takes place, death is the inevitable result. In no disease is the influence of mind on body so strikingly displayed as in *nostalgia*; without implying a metaphor, "the worm of mental malady," as Dr. John Reid beautifully expresses himself, "may be gnawing inwardly and undetected, at the root of the constitution," whilst the physician is solely occupied with some obvious and superficial symptom. In this disease the power of intellect over organized matter is most striking, and fully demonstrated, in the state of the lungs and liver, when the fatal termination of the disease affords an opportunity for the examination of these organs. The small extent of materia medica and pharmacy in affording remedial agents is thus displayed; and a proof, if any were required, is presented of the inseparable connection between moral science and the healing art. This combination is essential for the knowledge of mental alienation; and particularly so, for the discrimination of *nostalgia*, as it is frequently, although not always, in the highest and most cultivated persons that it displays itself; "the mind, in proportion as it is expanded, exposing a larger surface to impression."

I once saw the disease in a Scotch artizan; and Mr. Dunlop, in a note published by Dr. Beck, states that the only cases of the disease which he ever met with, were two:—one in a recruit, a country lad, from the fens of Lincolnshire, "who died," says Mr. Dunlop, "under my charge, on his passage to Canada, in the year 1813; and the other, a London pickpocket, whom I saw this year, 1824, in the hulks of Sheerness."

Nostalgia may be mistaken for melan-

cholia, by the restlessness and want of sleep which accompanies the disease; the strong tendency to self-destruction which attends it, when the desire of revisiting the country which is longed after cannot be accomplished; life becomes then a burthen, and the *tedium vitæ* leads to real insanity, terminating in suicide. From what has been said, the necessity for distinguishing *nostalgia* from insanity, when the distinction may prove serviceable, must be sufficiently obvious.

The last state which may be mistaken for insanity is the *imbecility of old age*. Man in his course of life seems to describe a circle, or to perform his course in an orbit; so that when it is naturally completed, he returns to the point from which he set out. In this state, the mind itself seems incapable of any progression; it lives upon its acquired stock of ideas, and is even so weakened, that the person becomes unfit to manage his affairs; and he must be treated either as a child, or as a lunatic. Although, however, in such cases, the law may rightly appoint trustees to manage the affairs of individuals, yet it is necessary that a proper distinction should be made between such cases and insanity; for while property should be protected, personal feelings must also be respected, and every person shielded from oppression or injustice. There is another state which also verges closely on insanity, that which often accompanies the premature senility of licentious youth. In the life of some men there is no manhood;—the day of their career has no noon; their morning, warmed by the scorching sun of excess, is followed by the exhaustion of evening, and the foundation of intellect is sapped before the superstructure is half completed. Still this is not real insanity; and the law does not permit the confinement of such a person, although his property may be placed in the hands of trustees, in the same manner as that of a lunatic. This protection rests entirely with the medical evidence upon which the decision, in any legal investigation connected with such a state, must rest. When insanity really occurs in old age, or when it accompanies premature age, such as I have described, no treatment, either moral or physical, can remove the disease; "the disorder of the faculties in such a case, is not likely to terminate, except in the quiet of idiocy, vacant superannuation, or in their complete extinction, in the calm of death."

Such are the topics, gentlemen, to which I have thought it necessary to direct your attention, as prefatory to the consideration of insanity in a medico-legal point of view, upon which we are now prepared to enter.

LECTURES ON THE INSTITUTIONS OF MEDICINE,

DELIVERED BY JOHN FLETCHER, M.D., F.R.C.S.E., AT THE ARGYLE SQUARE SCHOOL OF
MEDICINE, EDINBURGH; SESSION 1834-35.

LECTURE XIII.

Organic Functions—Vital Action or Life.

INORGANIC matters then, have no reciprocal action with the medium in which they exist; whereas there is no plant nor animal, the crude fluids of which do not maintain a continual interchange of gaseous matters with the atmosphere or water in which it dwells, and such an interchange is essential to the conversion of these crude fluids into the mature fluids, which are to minister to nutrition and secretion in general. This is effected generally by means of some proper organ, or the vesicles within the substance of the leaves of plants, or the lungs and their appendages, or some corresponding organs in animals; but sometimes, on the other hand, it is brought about by the surface in general.

Again, the substance of inorganic matters being exclusively either solid, liquid or æriform, it is evident that there can take place in them nothing analogous to a circulation of fluid through solid parts; and, if this be wanting, there can of course be nothing similar to nutrition and secretion on the one hand, or to absorption on the other. New particles may indeed be accidentally formed and deposited within or upon them, and this even after certain definite laws, as in the formation of stalactites, petrifications, &c., and their old particles may be accidentally broken down and carried away; but the former occurs only when such new particles have been conveyed to them by a fluid, which is afterwards removed, and the latter only when some chemical or mechanical power has been in operation. On the other hand, in every plant and animal as the mature fluids are constantly moving in the interstices of the solid, for the purpose of being formed into various new solids and fluids—the former in proportion as they are absorbed, the latter either that they effect some useful purpose in the system, or be carried out of it as useless or deleterious—so the crude fluids are equally constantly in motion, in some parts indeed as instrumental to secretion, but in most for the purpose of receiving again into themselves such solids and fluids as have already fulfilled their respective offices: and having arrived with them again at their respiratory organ, are there once more converted into the native fluid, to go through the same course as before. It is to these actions that the entire and spiral vessels of plants in general, and the heart, arteries and veins, and lymphiferous and chyloferous vessels, with the parenchyma and erectile parts of animals in general are subservient; but in quite the lowest tribes of organized beings it is not through proper vessels, but through their generally spongy texture, that the fluids are moved, and it is in this that all the offices which they perform are effected.

Further, inorganic matters, as they waste no part of their substance by any processes similar to the foregoing, so they do not renew it by receiving into themselves and assimilating foreign matters. But, while plants in general repair their loss by selecting from the soil by means of their absorbing vessels such matters as, with little or no assimilation, become at once their crude fluid, all animals take occasionally from the external world certain solid and liquid matters which they assimilate by a series of processes, called collectively digestion, each to the nature of its own crude fluids, and thus compensate for what has been consumed. It has been proposed as a general ground of distinction between plants and animals, that the alimentary matter of the former are always inorganic (a); and the vegetable kingdom has been thus represented as a kind of laboratory, in which mineral matters become adapted for the aliment of the herbivorous tribes of animals, as these last are a kind of laboratory, in which vegetable matters are rendered fit for the aliment of such as are carnivorous. If the recent speculations, however, respecting the indefeasible nature and perpetual transmutations of organic molecules be well founded, it follows that these proposed distinctions are quite imaginary, and that not only do plants, as well as animals in general, subsist in fact on organic matters, absorbed from the soil—using the water and salts, precisely as animals do, merely as diluents and condiments—but all animals indiscriminately are capable of subsisting on any kind of organic matters, whether vegetable or animal, always, provided that they afford a sufficient stimulus to the digestive organs (b). It may be made a question, however, whether the above distinction

(a) Brisseau—Mirbel, &c.

(b) It is an axiom as old as Hippocrates, that there are many species of food, but only one aliment; but whether he intended to imply by this that the essence, as it were, of every kind of food was primarily the same,

or that it only became so when acted on by the digestive and nutritive powers, is a question. The supporters of the molecular doctrines, however, choose to take the axiom in the former sense. "La matière," says Buffon, "qui sert à la nutrition et à la reproduction

between plants and animals be not objectionable, not so much because *neither* are capable of subsisting on inorganic matters, as because *both* are competent to do so; and whether that between different kinds of animals be not equally so, not so much because either vegetable or animal food will do equally well for both, as because neither the one nor the other is essentially requisite to either. Numerous instances are on record, and to some of them allusion has been already made, in which not only plants, but animals also, and these as well naturally carnivorous as herbivorous, have lived and increased in size when fed apparently on strictly inorganic matters—even on such as appeared to be quite destitute of certain elements in which their bodies abounded; and, however conducive ready-made organic matters may be to these ends, there seems to be no good reason for doubting that every organized being is quite competent so to separate and recombine, by the consecutive processes of assimilation and nutrition, the elements of many inorganic matters—at any rate where they contain all those which are presumed to be in requisition—as to form the immediate materials of its own tissues. Nay, there is good reason to believe that even organic matters are entirely decomposed and recombined by this double process; so that it is, perhaps, only by affording the precise elements, and in the precise proportions that they are required, that such matters are best adapted to the purpose. The principal organs which minister to the process of assimilation in animals—for plants have no specific apparatus for the purpose (*a*)—are the gullet, stomach, and intestines, with their appendages; but in quite the lowest tribes, the alimentary matters are received and assimilated, as well as, when assimilated, turned to their proper account, by the indiscriminate spongy mass of which they are composed.

Between all the above-mentioned actions of organized beings, which minister exclusively to the preservation of the individual, there is a fixed and determinate relation, nor is it severally and after each other, but as far as possible altogether, and with and through each other that they should be contemplated; the remark already made that “while each organ is itself more or less dependent on the rest, it conduces in a greater or less degree to the perfection of all,” being applicable to the fullest possible extent to all those which are concerned in the functions now under consideration (*b*), and this quite independently of the healthy action of each contributing by sympathy, as it also does, to the healthy action of all the others. Thus, unless the respiratory organs were continually supplied with the crude fluid from those of circulation, absorption, and digestion, they could not act reciprocally with the surrounding medium, and thus prepare the mature fluids; unless the organs of circulation, nutrition, and secretion, were equally constantly supplied with mature fluids from those of respiration, all these processes must stand still; and, if such were the case, neither could absorption go on, and whatever alimentary matters were received could never be assimilated, so that the supply of crude fluids would in consequence be cut off from the organs of respiration.

Such however is the economy of organized beings, that those very actions which are directly subservient to their preservation, besides entailing upon them many changes connected with various ages, and many accidental maladies, indirectly tend to exhaust and destroy them; and it is a law therefore of this economy, that every individual plant and animal, having, in a period more or less definite for each, attained its acme of perfection, begins to decay, and each at length—from the insect which perishes within the hour, to the tree which survives the revolutions of centuries—ceases to exist (*c*). To die then is as

de tous les animaux et de tous les vegetaux est la même”—(Hist. Nat. 1750); thus abolishing, at a word, all the above proposed distinctions.

(*a*) Saussure. (Rech. Chim. sur la Végétation, 1804). Hence we may say with Hippocrates, that the soil is the stomach and intestines of plants.—Ventriculus sicut humus—or with Aristotle and Boerhaave, that the vessels of their roots are analagous to the chyloferous vessels—a part of the circulating system—of animals, which comes to precisely the same thing, both propositions serving equally to withhold from plants any proper digestive apparatus. They *select*, rather than assimilate.

(*b*) It is likewise to this circle of actions alone that the well-known beautiful saying of Hippocrates, with respect to the functions in general—Πάντα ὁμοίως Ἀρχὴ καὶ πᾶντα Τέλει—*is strictly applicable.*

(*c*) The age to which animals in general attain is commonly estimated as between seven and eight times the period which they take to arrive at puberty—consequently man is one of the longest livers, at least of mammals, the whale being among the few which surpass him in this respect, as sometimes attaining to the age, it is said, of 300 or 400 years. Aquatic animals indeed, perhaps in general, live longer than terrestrial, the carp (*Cyprinus*, 35), for example, often attaining, it is said, to the age of 100, and the pike (*Esox*, 34) sometimes to that of between 200 and 300. Among trees the lime is computed to have arrived at the age of 580 years, the cypress of 900, the oak of 1600, the yew of 3000, and the celebrated baobab trees of Africa, of 5150; so that it is not improbable that “some individuals, now existing, may have been silent witnesses of the Noachian deluge.”

characteristic of organized beings as to live; and, paradoxical as it may appear, it is a fact, from a distinct vital process, that death in all cases immediately results (a). Inorganic matters, sustaining no changes of this kind by any inherent actions, and incapable of becoming extinct, are of course unprovided with any inherent means of perpetuating their kinds; and the existence of each is quite independent of the pre-existence of any other. On the other hand, organized beings, certain as they are to become individually annihilated, are provided with the means of forming and separating from themselves, at definite periods, certain organized parts, which, becoming at length new beings of the same species, constitute another and another generation, so that, while individuals perish, the race is perpetual. The principal organs which minister to the process of generation, are, in plants in general, pistils and stamens, and, in animals in general, both viviparous and oviparous, the ovaries and testicles, with their respective appendages; but in quite the lowest tribes of organized beings, which are without distinction of sexes or sexual organs, no equally specific parts are appropriated to this function, their propagation being effected, sometimes by a spontaneous division of themselves into distinct beings, when they are called fissiparous, at others, as in the gemmiparous tribes, by the detachment from some part of their bodies of shoots, which become ultimately possessed each of an independent existence. What is properly called generation then is the formation or secretion by organized beings of other organized beings in the likeness of themselves, whether thousands of millions, as in many fishes, or one only, as in man, be at once so formed; but it is not certain that they have not the power also of forming, in a similar way, many other organized beings, distinct as well from themselves, as from each other. Of this nature are parasites: and when we consider that not only every animal, but almost every organ of every animal has its own proper parasites and no other (b); that other, if not living animals, at least living tissues, such as tubercles, encephaloid tumours, melanoses, and schirri, are certainly the products of a specific secretion, and that it is more than probable that all these were at first a kind of parasite (c), possessing each its own rudiments of organic structure, and only by an ulterior process, establishing an imperfect connection with the contiguous parts (d): that at least one kind of parasites, namely hydatids, are often found in parts which are known to have suffered contusions, and have even been artificially produced by this means (e): and lastly, how totally untenable are the various other hypotheses which have been at different times advanced to explain their production—as that they are received into the body with the aliment, &c. in the form of ova, deposited either by animals the natural habits of which is without (f), or by the proper entozoa of other animals previously passed from their bodies (g), or that the said ova are conveyed directly from parent to offspring, either while in utero along the umbilical cord, or after birth with the milk, having been at all times a proper constituent part of the body of the former (h), or lastly, that such parasitical ova are evolved simultaneously with the proper ovum of the being which is to contain them, the former having from the first existed within the latter (i),—we can hardly refuse to believe that the parasites of animals are as much an immediate product of secretion, as their own proper progeny (k); but that as the

(a) A late Professor of the Institution of Medicine, in the University of Edinburgh, no less estimable in every other capacity, than tiresome as a teacher, was accustomed to incur a great deal of unmerited ridicule by prefacing his Lecture on Dissolution, with the remark that he had now to treat of "the last function—Death." He was perfectly correct in his definition.

(b) Thus man is liable to 12 proper entozoa—1 in the lungs, 6 in the intestinal canal and its appendages, 1 in the urinary organs, 1 in the ovaries, 1 in the integuments, 1 in the eye, the brain and the muscles, and 1 lastly, in any organ except the intestinal canal—all quite distinct from numerous other animals which are reported to have been passed sometimes from the stomach, urinary bladder, uterus, skin, and other organs, and the source of all which was in all probability really received ova. Again, the hog (*Sus*, 44), and the sheep (*Ovis*, 45), in their several organs, are liable each to 9 proper parasites: the ox (*Bos*, 45) to 11, the horse (*Equus*, 46), again, to 9, the hare (*Lepus*, 49)

to 8, and the fox (*Canis*, 50), once more, to 9; birds in general have about 7: among reptiles, the frog (*Rana*, 32) is liable to 8: and among fishes, the perch (*Perca*, 20) to 7, and the salmon (*Salmo*, 29) to 8. Almost every organ also of every invertebrate animal seems to be distinguished in like manner by its own proper parasite.

(c) Justamond, Adams, Carmichael, Barron, Fosbroke, &c.

(d) J. Hunter, Doëllinger, Gruithuisen, Meckel, Beclard, Lobstein, Hastings, &c.

(e) Bremser.

(f) Leeuwenhoek, Linnæus, Andry, Boerhaave, Hoffmann, &c.

(g) Pallas, Reinlein, Brera, Rhind, &c.

(h) Valisnieri, Goëze, Bloch, Werner, &c.

(i) Haller, Bonnet, &c.

(k) Rudolphi, Bremser, &c. It is proper to remark, however, that although it is de novo that entozoa are formed, according to these authors, in the animals which contain them, and therefore as the result of secretion, still it is not, they imagine, that of substances organized from the first in the man

former are laid down in numerous organs, and differ in each like their other secretions, so the latter are formed only in the ovaries or corresponding organs, of which it constitutes in like manner the natural and proper secretion. It is indeed difficult to understand how persons who believe that living animals have the power of constantly renewing by secretion their own natural organized tissues, or even whole organs, as well as of depositing such as are altogether preternatural, which—at first isolated—become united with the parent tissue only subsequently, can be startled at the idea of their secreting their own proper progeny, and still more their own proper parasites; but it is only one of the innumerable evils into which the want of a proper idea of the nature of life has led physiologists, that the doctrines respecting generation, in all its forms, have been more vague and visionary than those respecting almost any other function of the body. They think they can comprehend the expansion of a living principle over a larger or a smaller area; but like Malebranche, they cannot understand the creation by one living being of a new living principle, such as is presumed to be necessary to vivify another. The difficulty however is an imaginary one. There is no creation of life in the case—no “Univocal Generation,” as it was called by Redi, or communication of life from one being to another; but only such a new combination of matter by secretion as necessarily developes one of its conditions, namely, vitality, and this, when acted on by the necessary stimuli, gives rise to those phenomena in which life consists (a). Whatever opinion, however, we adopt with respect to the source of parasitical animals, it must lead equally to the conclusion that the existence of every organized being implies the pre-existence of some other, either of the same or of a different species, and thus to the establishment of a broad line of distinction between them and inorganic matters.

The several functions then thus summarily run over, may be represented as primary and essential, and said to constitute the main revolving wheel, as it were, of the organized machine; and however numerous may be, in the more perfect kinds of this machine, the minor wheels which are called at second hand and incidentally into play, it is upon the movements of this that those of all the rest are dependent. Accordingly in the diagram already published, which is intended to illustrate among other things the mutual relations of the functions of the higher tribes of organized beings, these characteristic actions of all such beings are represented as constituting the lowest wheel, to signify their fundamental nature, and at once their independence of all other actions, and their instrumentality in supporting those additional actions which the higher tribes alone of such beings display. These additional actions are those in which sensation, thought, and voluntary motion consist; but into a consideration of these, as it were, adventitious functions, it is inexpedient to enter at present, since, as before observed, they appear to require some other conditions besides those which alone are essential to the foregoing, and which it is our business now to investigate.

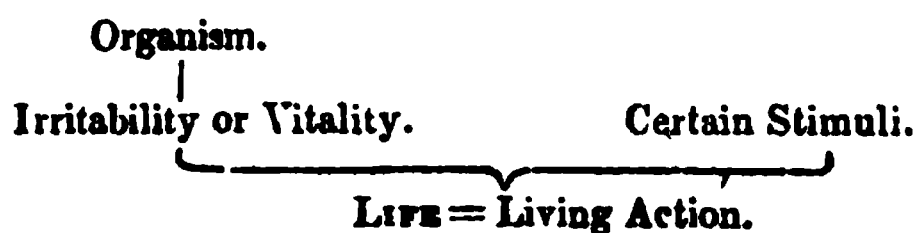
It is, then, in the sum of those actions of organized beings which have been above described as fundamental, whether any others be added to them or not, that LIFE appears to consist. Organism and life are, under ordinary circumstances—in other words, under the application of the requisite stimuli—coincident, the commencement of the former producing generally that of the latter, while the cessation of the former gives rise always to that of the latter also; and if we retrace all that has been said respecting each particular feature in the structure of organized beings—their individuality and definite form and volume, the multiplicity of their distinct organs, the co-existence in them of solid and fluid parts, each in a constant state of mutual conversion, and their specific chemical nature—we shall find that every thing relating to their organism or structure has a direct relation to their life, or the actions which they are to perform. Organism and life, then, in this sense of the latter term, may be described as standing in the relation *indirectly* of cause and effect to each other, the former giving rise essentially to the development of a certain property called irritability or vitality, which, when acted on by certain powers, generally in

ner of newly deposited tissues, but of an unorganized mass which, upon its spontaneous separation, gives rise to new living beings upon the molecular principles lately spoken of. To the objections to these doctrines it is unnecessary to recur at present. Every view of the matter seems to favour the presumption that every new animal as well as every new part of every animal, is laid down first as a kind of organized germ formed by secretion; and that the axiom “*Omnia ab ovo*,” in this extended sense of

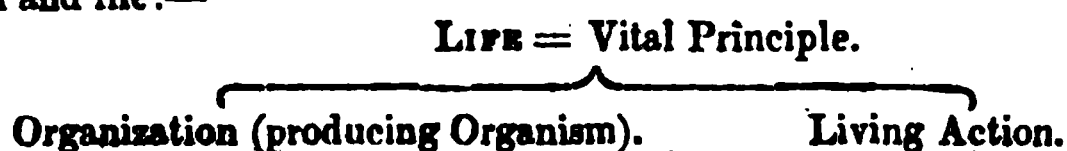
the word, is still unimpeached and unimpeachable.

(a) “It is absurd,” says Mr. Bushman, in a very succinct and clear account of the various hypotheses which have been advanced to explain the origin of parasites; “it is absurd to talk of finite beings creating any thing, but it is worse than absurd to talk of their creating that which has no existence.” —(*Account of worms found in the reins of a boy*, 1833).

more or less constant operation, produces those actions in the sum of which life consists. This relation, then, of the two may be represented by the following plan:—



This view of the matter, however, has not always, nor even generally been taken; the structure of organized beings having been admitted indeed to be identical with their organism, but not their actions with life; and while it is allowed that this organism and these actions are commonly coincident, it is denied that they stand either directly or indirectly, in the relation of cause and effect to each other, both being described as dependent on life as a substantial principle. The following plan may represent this relation of organism and life:—



It is hence obvious that the word Life is employed in two very different acceptations, signifying sometimes merely that chain of peculiar actions above described as characteristic of organized beings, the immediate conditions of which are to be sought for, partially at least, in a necessary result of organism; and sometimes a substantial principle—an entity, whether material or immaterial (*a*)—which, entering certain aggregations of matter, regulates as well their organization—whence results their organism—as all the other phenomena which they exhibit (*b*). The questions then arise, 1st, What evidence have we of the existence of any such substantial principle? and 2nd, How far is it adequate, admitting its existence, to explain vital phenomena (*c*)? If we fail in establishing both its existence and its adequacy to produce the effects which have been ascribed to it, we must acquiesce in the proposition first advanced, that Life is a mere abstract term used to denote the characteristic actions of organized beings resulting more or less immediately from their organism.

(*a*) It would not have been considered necessary to remind the student that the existence of an immaterial substance—an *δυσία αἰλος*, as well as a *υλη*—has never been regarded as an impossibility, had not some recent writers seemed to imply the reverse. Dr. Bostock, for example, accuses Mr. Mayo—the correctness of whose general phraseology he is pleased at the same time to compliment—with having controverted his own proposition in the very statement of it, where he says, “Mind and matter are logically distinct substances.” (*El. of Physiology*, 1825, vol. i, p. 301). Whether they be so or not, may be questioned; but it is at least certain that they may be so.

(*b*) In ancient times life, in the former of these senses, was called by the Greeks *Ζωή*, and by the Romans, *vita*; in the latter, by

the Greeks *ψυχή*, and by the Romans *anima*. We have unfortunately no single term by which to designate the supposed substantial principle, if we employ the word life to signify merely the chain of actions, and no one by which to designate the chain of actions, if we apply the word life to the supposed substantial principle. We can do better, however, without a term for the principle than for the actions.

(*c*) It is a rule of the immortal Newton, of which we are aptly reminded by Dr. Prichard, in entering upon the present discussion, (*On the Vital Principle*, 1829), “*Causas rerum naturalium non plures admitte debere, quam quae et verae sint, et earum phenomenon explicandis sufficient.*” (*Principia*, lib. iii).

LECTURES

ON THE

PHYSICAL EDUCATION AND DISEASES OF INFANTS,

FROM BIRTH TO PUBERTY,

BY DR. RYAN,

Delivered at the Medical School, Westminster Dispensary, Gerrard Street, Soho;

Session 1834-35.

LECTURE XXIX.

Hydrorachitis or Spina Bifida—Hydrocephalorachy, (Dropsy in the Brain and Spine)—Hydrencephalocèle, (Dropsy of the Brain and Scalp)—Congenital or Intra-uterine Ascites, Hydrothorax, Anasarca and Epiploric Dropsy—Hydrocele, (Infiltration of the Genital Organs, Mammæ, Cellular and Adipose Tissues), Sclérème (French), Skin-bound Disease (English).

GENTLEMEN—I have now to direct your attention to the nature and treatment of the remaining varieties of congenital dropsies. At our last meeting I gave you the history of congenital hydrocephalus; and I shall now place before you the pathology and treatment of hydrorachitis or dropsy of the spinal marrow, thus uniting the diseases of the cerebro-spinal organs.

The disease was first described by the Arabians, who supposed it to have arisen from a double set of spinous processes, and therefore called it spina bifida, or bifurcated spine. But it was first accurately described by Tulpius, G. Bauhin, Ruysch, Bonetus, Maurice Hoffmann, Morgagni, Camper, and Portal. Dissection has repeatedly shewn, that not only the spinous processes, but sometimes the rings of the vertebræ are deficient. Sauvages termed the disease hydrorachitis (*Nosol. Meth.*), Pinel, hydrorachis (*Nosog. Philos.*), and Frank, hydrorachia (*De Curat. Morb. Hom.*) In this country the ancient term, spina bifida, is, in general, still retained.

The term hydrorachitis is applied by some authors to a collection of serosity or serous fluid in some part of the spine, distending the skin; and spina bifida to a want of the vertebræ corresponding to the diseased part. Others have termed the latter disease spinal hernia, on account of the projecting tumour.

The disease called spina bifida in this country, consists of a fluid distending the membranes which envelope the spinal marrow or brain. It is generally congenital, and rarely occurs after birth. Otto has seen it so early as the sixth week of utero-gestation.—*Dict. de Med. et Chir. Pratq.* 1833.

It consists of a soft tumour, sometimes opaque, often transparent, red, or of a dark colour. It may be round or elongated, and hangs by a narrow neck. It is in general of the colour of the skin, but may be red, crimson, or black, and varies in size from that of a pea to that of a man's head in the adult, or an orange in the infant. Brunner describes

a case, in which the transparency of the tumour was so great, that the mother could see her figure and dress in it, as in a mirror.—*Miscel. Curios.* Dec. 3, cap. i. It varies in size, and may be as large as a man's head, as will appear immediately—a fact I can also attest. It is most commonly situated in the lower part of the back, or in the upper part of the loins; but it has been observed in the neck, different parts of the back, loins, and even at or near the coccyx. It was observed in the cervical region (Tulpius), at the base of the sacrum (Genga and Portal), on the last dorsal vertebra (Wepfer), and along the whole spinal column (Lechellius and Richard). In some cases there are two or more tumours, which are distinct, communicate with each other, or with the brain.—*Brewerton, Edinb. Med. and Surg. Journ.* vol. vii.; *Stafford on the Spine.* When the spinal dropsy communicates with the brain, the complicated disease is designated hydrocephalorachy—a term which signifies, dropsy of the brain and spine. In employing this and similar classical terms, I am aware that those who have not received a classical education may sneer at them as hard words, as such persons term them; but I would tell them that such are used by the most celebrated professors and writers in other countries: and I cannot comprehend the reason—indeed I am convinced there is none—why we should not be as classical as our neighbours. I believe this empire was never behind any nation in the civilized world, in learning, the sciences, or the arts; and it is only to be deplored that some illiterate and unclassical men should be placed, by chance, among our periodical writers, and be enabled to sneer at the classical terms generally adopted in every other part of Europe as well as in this country, except by such ignoramusses. I make this observation, as I shall have to employ terms in this lecture, which will astound these sapient critics.

The records of medicine affords many examples of this malady, in which fluid was found in the whole extent of the spinal column. Valsalva and Bidloo have described such cases. Capuron and Billard state, that the disease is often combined with hydrocephalus—a fact attested by numerous other authors. According to Duges, dropsies of the head and spine are the most common and remarkable of all the congenital dropsies. This accords with my own observation. This distinguished author divides them into four classes:—

1. Hydrocephalorachy, or complete cerebro-spinal dropsy, which distends and deforms at the same time the head and spinal canal.—*Ephemerides Medicales*, t. ii. p. 312.

2. Hydrocephalus, which fills and distends the cranium; a variety described at our last meeting.

3. Hydrencephalocèle (Corvinus), when some point gives way, and a

tumour is formed which communicates with the brain. Thus there are hydrencephalic, ethmoidal, frontal, bregmatic, syncipital, suboccipital, and supra-occipital tumours, or in other words, tumours of this kind may present on any part of the cranium; but especially on the anatomical regions above enumerated, and alluded to in the preceding lecture.

4. Hydrorachitis, or spina bifida, which has been just described.

Causes, Formation, and Progress.—The causes of congenital dropsies are increased quantity of blood in the affected part, a great quantity of amniotic fluid surrounding the infant in the womb, infiltration or dropsy of the parent, a hereditary predisposition to hydrocephalus, advanced age of the mother, venereal infection, &c. Burgius relates the history of a woman whose first infant was a well formed female, the second a male with spina bifida, the third another well developed female, and a fourth affected with spina bifida. The disease may be slow or rapid in its progress. Hydrocephalorachy is generally rapid in its development, and frequently bursts before the birth of the infant, or during parturition, when subjected to the pressure essential to that process (Geoffroy Saint Hilaire); but it ruptures most frequently during pregnancy, and there results a cranio-vertebral anencephaly, often with complete destruction of the brain and spinal marrow, sometimes these organs existing (*notencephaly*, &c.), the dropsy being internal in the one case, and external in the other. Whether the dropsy be internal or external, it is always contained in the arachnoid, which not only lines the ventricles of the brain, as demonstrated by Bichat, but also descends over the spinal marrow, and in the normal state incloses a small quantity of fluid (Magendie). But it is easy to conceive that adhesions or other mechanical obstacles may interrupt the cerebro-spinal communication, and circumscribe the collection of the fluid either in skull or spine. Dissection occasionally enables us to observe effusion of serum and blood in a circumscribed portion of the spine, without any lesion of the bones. Mr. Stafford describes cases in which the fluid was in separate cysts, and states that it is contained between the arachnoid membrane and pia mater (*Op. Cit.*) The spinal nerves of the affected part are altered (Tulpius, Burgius, Brunner, Morgagni, Camper, &c. &c.) The medulla has terminated in the tumour (Brunner, Hoin, Sandifort, Apianus). Hydrocephalus commences very near the period of conception, may advance rapidly, burst the cranium, and produce anencephaly or microcephaly; or it may continue until birth, and impede parturition: but in other cases it may not retard that process, and only develope in the first years of infantile life.

Hydrencephalocoele and other Cranial Tumours.

—Hydrencephalocoele may continue until the period of parturition; and it is to the intra-uterine rupture of this tumour we assign the formation of monopsy, apropsy, certain encephalocoeles (*prodencephaly*, *derencephaly* of Geoffroy Saint Hilaire).

It is very difficult to form a diagnosis between congenital tumours on the scalp, and hydrencephalocoeles. I well remember a case in which I was consulted in 1825, of a young lady aged eighteen years, well developed, menstruation being natural, who had a tumour on the superior part of the frontal bone, about the size of a breakfast tea-cup, capable of containing five or six ounces. I was informed that this was perceptible a few months after birth, and had gradually increased in size. It was not painful, nor productive of any inconvenience, but was considered a deformity. The bone appeared to be wanting round the base of the tumour; but on making graduated pressure, the size of the anormal production was not diminished. This was satisfactory evidence that the tumour did not communicate with the brain, notwithstanding the apparent absence of the frontal bone—that it was not a hydrencephalocoele—and moreover the excellence of the general health, and the period of life, which are unusual in the latter affection, warranted my conclusion. After a most mature consideration of all the symptoms and peculiarities of the case, I determined to puncture the tumour, and evacuate its contents. The bowels having been regulated, and a proper diet taken for a few days, I punctured it with a common lancet; about five ounces of a thick, gruel-coloured ropy fluid escaped, of a most offensive odour; there were no signs of cerebral depression or disturbance during the operation or evacuation of the fluid, and the pulse remained natural. On examining the frontal bone with a probe, it was found perfect, except depressed, as if absorption had taken place from the pressure of the suprajacent fluid. The supposed absence or depression of bone is a common symptom in extravasation of blood under the scalp; and this fact was not forgotten in forming the diagnosis. The sac having been fully evacuated, a weak solution of sulphate of zinc was injected; a compress was then applied and secured with a roller; cathartics were administered, and adhesion took place. Pressure was continued until the puckered integuments were so reduced by absorption, that it would be impossible for any one to suppose that a tumour had ever existed on the forehead. There was another peculiarity in this case, worthy of notice. The fluid was extremely offensive. A small quantity escaped on the floor, and the nauseating odour was so intense as to withstand the effects of pyroligneous acid, oil of turpentine, and ablution and was only removed by a solution of the

chloride of lime. This case will appear interesting, when contrasted with those of hydrocephalocoele which were treated by Richter, Grew, and H. Earle, and which I shall immediately notice.

Lastly, hydrorachitis may be ruptured before or during birth (*Tulpius Obs. Med.* 1685); or when small may remain entire on the newborn infant, and continue unbroken for several years. I have seen cases in which it was ruptured, and others in which it remained uninjured at birth. I was suddenly summoned, a few years ago, to attend a lady in her confinement, in the absence of her ordinary attendant. The parturition was natural, but the infant was born with a hydrorachitis in the lumbar region. The colour of the integuments was a deep crimson, the infant was not developed, and the tumour was the size of a racket-ball. My prognosis was unfavourable. Cold applications were employed, but the tumour burst on the seventh day; paraplegia followed, and the infant died on the twelfth day of its age. The tumour burst during parturition in two cases which fell under my observation. In the former variety, the spinal marrow was diminished or totally destroyed; and Duges met with an example in which it was cicatrized. The disease has been mistaken for an abscess, and opened.

Prognosis.—Hydrocephalorachy is generally mortal, whether it be ruptured before or after birth, on account of destroying by pressure and absorption the central parts of the nervous system, or the brain and spinal marrow; and it is speedily fatal when it remains entire at birth. There is a recent example observed in an adult, which was most probably an instance of extreme deformity of the spine caused by rachitism (rickets). Infants affected with this disease, generally die in a few days after birth.

When there is intra-uterine rupture of hydrocephalus, the foetus is destroyed; and in those cases in which hydrocephalic infants are born alive, viability is generally destroyed, though life may be protracted for several years. A variety of external causes, such as falls, blows on the head, or falls from a height on other parts of the body, may so concuss or shake the brain as to induce determination of blood to that organ, and render the original disease speedily fatal. The least fever, bad cough, hooping cough, teething, irritation in the bowels, will act in the same manner, induce congestion, coma, or convulsions, and death. Life may, however, be prolonged to an advanced age—thirty years (Van Swieten), thirty-five (Ekmark), fifty-five (Gall.) In cases of this kind the head gradually increases to an enormous size—36 inches in circumference (Monro), 880 millemetres* (Spurzheim),

920 in a girl aged two years (Lanetti), quoted by Esquirol, *Gaz. Med.* Jan. 24, 1835; Ryan's *Med. & Surg.* v. 7, 1835. The head contained thirty-six pints of fluid in Esquirol's case. It is worthy of remark that the head may cease to enlarge in some cases. Duges observed an instance in which the head was very large after birth, but it ceased to enlarge in the same proportions, and gradually approached the natural size, the intellectual faculties developed, and the infant assumed the erect position. The case now under treatment at the Western Dispensary, and mentioned in a late Clinical Lecture, is another proof of this fact. Hydrocephalocoeles, broken or unbroken, are generally mortal; but sometimes allow the infant to survive for some months, and even for twelve years (Spurzheim).

Prognosis and Pathology of Hydrorachitis.

—Hydrorachitis is generally dangerous, and mostly fatal. The disorganization of the spinal column and its contents, the separation of the vertebræ and the protrusion of the tumour, which is speedily irritated and inflamed by the dress and handling of the infant, predispose to rupture or gangrene, and when this last occurs, involuntary evacuations, paralysis of the lower extremities, and death speedily follow.

Nevertheless, life has been preserved to the tenth year (Bonn), to the adult age (Meckel),—and our museums contain casts of large spinæ bifidæ in full grown individuals. I have seen some casts representing cases much larger than the head of an adult.

Mr. C. Hutchinson describes a case of a young woman of nineteen; and Warner, a patient aged twenty. Mr. Jukes gives the history of a young female aged nineteen.—*Med. & Phys. Journ.* 1822. Mr. Stanley mentions in his lectures that he knows a case of an individual in the twenty-second year of his age.—*Stafford on the Spine*, 1832.

On examining the body after death, the spinous and transverse processes of the vertebræ are imperfect or destroyed, but the bodies of the bones are in most cases free from alteration. Firlez describes a case in which the whole spinous processes were wanting.—*Richter Chir. Bibl.* v. 9. There is sometimes a fissure in the bodies of the vertebræ, through which the intestines may be seen, and an adhesion of the bowel to this aperture has formed artificial anus, so that the fæces passed through the spinal tumor.—*Wepfer, Miscel. Cur.* Dec. 3. Saltzman, quoted by Mr. S. Cooper, in his *First Lines*, relates a similar case. The spinal marrow, if it exist, occupies the anterior part of the tumour. Senac observed, that the fluid contained in the tumour communicated with the ventricles of the brain, while Lancisi, Mayer, and Brunner, remarked that when it escaped, the size

* Millimetre is computed by Dr. Ure at .03937 English inches. The admeasurement

is here about 37 inches in one, and nearly thirty-eight in the other.

of the head diminished. Morgagni relates a case in which pressure on the tumour was distinctly felt by the hand placed on the fontanelle, and pressure with the hand so placed caused the fluid to descend, and distend the tumour.—*De Sed. et Caus. Morb.* 12. Bertrandi reports a similar example.—*Opere di Ambrogio Bertrandi.* t. ii. See also Brunner *Op. Cit.*, Mayer, Bonetus, Genga, Dubruil, *Ephemerides Medicales*, Pecklin, Sandifort, *Dict. de Med. & Chir. Prat.* 1833. Keilman *Prodom. Act. Havn. &c. &c.* Others have attested this observation; and the fact disproves the opinion maintained by B. Bell, Rosen, Lassus, and Bodin, that spina bifida was confined to the spine alone. It also shews the incurability of the disease when connected with the brain. There are cases in which the fluid was encysted between the membranes and spinal cord, and these have been cured. Thus, a thread passed through the tumour, in the form of a seton, has been followed by complete success—(Hoffman, Cooper, Earle, Bozzeti). This plan was first proposed by Bodin and Dessault. Camper, Maurice, Hoffman, relate one case each, cured by puncture, an operation revived in this country, by Mr. Abernethy, but found to fail. Sir Astley Cooper related one case in which repeated puncturing the tumour with a needle, and moderate pressure, effected a cure.—*Med. Chir. Trans.* v. 2. (A full account of Sir Astley's cases will be found in Cooper's *Surgical Dictionary*.)—The object was to evacuate the tumour by puncturing it repeatedly, and to excite adhesive inflammation, so as to cure the disease. This could only succeed when the disease is circumscribed and remediable. Mr. Earle relates a case of occipital hydrocephalocele, which he repeatedly punctured with a common needle; ulceration at length set in, and the child rapidly sunk.—*Med. Chir. Trans.* v. 7.—Richter relates a similar case (*Chir. Bibl.*)—Grew and others state, that the tumour had subsided by the efforts of nature, or by artificial means; but that hydrocephalus supervened, and speedily proved fatal. Strong compression, a free opening into of the sac, the application of a ligature, have been rapidly succeeded by death. Mr. B. Bell was the first who proposed a ligature, but it does not appear that he had ever employed it. But moderate compression of the tumour, and a simple protection from external injury, have preserved life to an advanced age—to fifty years (Meckel).

Genga and Camper state, that a spina bifida complicated with hydrocephalus, was cured by the rupture of the spinal tumour. This was seated near the coccyx.

When the infant affected with spina bifida is premature or delicate, it seldom survives, and is usually destroyed in a few days after the rupture of the tumour, a fact I have mentioned already. When there is natural development, the prognosis is much more

favourable. But when we consider the inconstant motion of infants and children, we must see the great liability there is of irritating or inflaming the tumour; and therefore, the prognosis in all cases must be given with caution.

Before leaving this topic I may briefly enumerate other malformations of the medulla spinalis, or spinal brain: numerous specimens of which are preserved in our museums; and M. Ollivier has cited numerous authors, and related several cases of each variety, which had fallen under his own observation.—*Traité de la Moelle Epinière*.—The malformations are as follow:—1. Total absence of the medulla spinalis. 2. A total want of the nervous system. 3. A simultaneous absence of the brain and spinal marrow. 4. An imperfect state of the latter. 5. A division of the marrow into two halves of a greater or less extent. 6. A double formation of the spinal marrow. 7. A variety in its length and thickness, and of a central cavity in its substance.

The absence of the spinal cord, amylic is ascribed by many of the most celebrated physiologists to an arrest of development (Bec-lard, Meckel, Ollivier, Duges, Geoffroy Saint Hilaire, Billard, &c.) The brain is also wanting in such cases. This confirms the modern view of development. The ancients followed Galen in supposing the spinal marrow was an appendage to the brain. Plato, Praxagoras, and Philotine, believed that the spinal marrow was formed before the brain, a doctrine revived by Gall, and proved by Tiedemann. It is now the received doctrine, that the spinal marrow is formed before the brain, and that this last is only an expansion of it. According to this conclusion, if the spinal marrow be absent, the brain must be absent also; and this is invariably the case.

Congenital Ascites, Hydrothorax, and Anasarca.—Dropsy of the abdomen or ascites has existed in the fœtus in utero, and impeded parturition. Obstetric writers cite examples of this kind. Two remarkable cases of recent date may be quoted. MM. Billard and Duges have recorded cases of acute and chronic peritonitis of the infant during intra-uterine existence; and it is as reasonable to admit such reports, as those of inflammation in the brain, lungs, or any other part.

Baron Roux relates the following remarkable case of intra-uterine ascites, hydrothorax, and anasarca. A pregnant woman, aged thirty years, fell from a height upon her abdomen, and the effect was a general commotion in the lumbar and hypogastric regions, which was followed by strangury. A month afterwards she was taken with labour, which was impeded by the size of the bladder, which it was necessary to puncture. Six pints of fluid escaped by the canula, and finally by the natural passage. She was the

livered of a dead infant. On opening its body, there was nearly a pint of fluid found in the abdomen and chest, and the cellular tissue was the seat of general infiltration. All parts of the body, both internal and external, were well developed, and there was no tendency to mortification.—*Journ. de Med. Chir. et Pharm. par A. Roux*, t. xvii.

I have met with three similar cases.

Congenital Epiploic Ascites.—*Partial Anasarca.*—M. Ollivier (d'Angers) relates the following singular case, which is perhaps unique. A woman, who always enjoyed good health, was delivered at the eighth month of ptero-gestation of a dead infant well formed. I was struck, says the narrator, at the enormous size of the abdomen, whose parietes were so thin as to enable me to see the transparent fluid which distended it. On dividing the integuments, some cupsful of yellow transparent serosity escaped, the peritoneum was white, and without any injection. The lower part of the abdomen was filled by a transparent tumour formed by the great epiploen which contained a yellowish, limpid serum, in which flocculi of lymph floated. Was this the result of epiploitis?—(*Arch. Gen. de Med.*, t. vii, p. 383.) Mauriceau, Portal, and a host of others, describe ascites in the fœtus in utero. Analogy warrants the conclusion, that hydrothorax or dropsy in the chest, may also exist. The case of M. Roux, and those witnessed by myself, prove that universal anasarca may be congenital.

There may also be partial œdema or dropsy. An infant is born with the integuments of the scrotum infiltrated; the nurse soon detects this disease, and directs the attention of the medical attendant to it. She states, "there is something amiss with the purse." This dropsical infiltration may extend to the penis and prepuce. We also occasionally observe female infants with infiltration or swelling of the labia and nymphæ (external genitals), as congenital affections. The repeated application of cold water, camphorated spirit and water, solutions of acetate of lead or muriate of ammonia very speedily remove this disease. The last form of congenital dropsy is termed *hydrocele*. This disease was first described by M. Viguerie, a distinguished surgeon of Toulouse. It is common to new-born male infants. It consists in a tumour on one side of the scrotum, caused by a collection of fluid in the closed sac, tunica vaginalis, or continuation of the peritoneum, (a serous one, like those in the head, chest, and abdomen). The inguinal canal which affords a passage to the testicle is generally obliterated at birth, but may also allow the descent of the serous fluid accumulated in the abdomen. It is to be recollected that the peritoneum or membrane which covers the parietes or walls of the abdomen and bowels, and contains the fluid in dropsy of the abdomen, descends into the scrotum and forms a bed for each testicle.

In general, when the testicles descend at

each side, the femoral rings or openings in the groins which allow them to pass are soon closed; but this does not always happen. Fluid from the peritoneal membrane, may therefore pass into the scrotum, and this part will be swelled on one side, seldom on both. But the disease often exists in the absence of all signs of dropsy. The femoral rings may be obliterated in the new-born infant as well as in the adult; and in such cases the hydrocele will be local and contained in the tunica vaginalis, without the possibility of pressing it into the abdomen. There is no danger whatever to be apprehended from hydrocele. The repeated application of cold water, or lotions, which are better, will very speedily remove it. M. Capuron advises pressure, so as to force the fluid into the abdomen; but according to my experience, cold will effect a cure. M. Duges seems disposed to recommend a small puncture; but I never met with a case of hydrocele in which it was necessary. If cold applications fail, the scrotum being suspended in male infants, we may in general expect a cure after the use of some of the preparations of iodine. My distinguished correspondent, Professor Dewees, recommends pouring two quarts of cold water through the pipe of a tea-kettle, from a height, over the tumour. But I have repeatedly known hydrocele cured by pouring half a pint of cold water through the pipe of a teapot. It is scarcely ever necessary to puncture. If the application of cold had failed, I should try a weak solution of iodine, such as Lugol's mineral water, as I have lately cured two cases of the disease in the adult by this remedy. Both patients were treated at St. John's Hospital, and seen by several students.

Congenital Infiltrations of the Genital Organs.—Infants are sometimes born with swelling of the scrotum in the male, and also of the external genitals in the female. This swelling is caused by infiltration of the cellular tissue, and tumefaction of the scrotum is sometimes caused by pressure during parturition in gluteal or breech presentations. In delicate infants, or those kept too warm, the scrotum may be relaxed—but this is no sign of weakness; it is caused by the heat of the napkin, and disappears on the application of cold water. If it did not disappear on the use of cold, and was always constant, then it would be indicative of disease or debility. Infiltration, or swelling of the scrotum, unaccompanied by redness, heat, and pain, is rapidly removed by the use of cold water or lotions. It usually disappears in a few days, without any medicine. The application of cold water at the time of ablution, whenever the infant soils itself, is generally effectual. In some obstinate cases, solutions of acetate of lead, muriate of ammonia, &c., are required. It would be right to advise the nurse to suspend the scrotum, or raise it towards the abdomen, which is easily effected

in applying the napkin about its hips and thighs.

Congenital Tumefaction of the Mammae.—The mammae or breasts of infants of both sexes are generally swollen at birth. The colour of the skin is natural or reddish. Mothers and nurses often inflict great injury by attempting to squeeze out the milk, as they term it, which they erroneously imagine is the cause of the swelling. Gentle suction, or friction with olive or almond oil applied night and morning, usually removes the disease. The application of a sponge, dipped in cold water in summer, and tepid in winter, when the infant is stripped, night and morning, will speedily remove this disease. If inflammation appears, the skin being hot, swelled, and painful, warm poultices must be employed. I have been frequently requested to visit infants who were constantly screaming, without any evident cause; but on stripping them, an abscess of the breast, varying from the size of a walnut to that of a pullet's egg, was discovered. Severe pain was excited whenever the infants were moved; and also by the pressure or friction of the dress. On opening the abscesses, immediate relief was produced.

Lastly, there is sometimes a serous discharge from the navel, after the separation of the remains of the umbilical cord, about the fifth day or later; and is mostly caused by a very small fungus. It is speedily removed by a saturated solution of alum, or a little red precipitate, or moderate pressure. The application of nitrate of silver is effectual, but should not be tried until ordinary remedies have failed. Some practitioners advise a ligature, but this is rarely necessary.

Congenital Dropsical Induration—Sclérème (Skin-bound).—There is also another kind of swelling in all parts covered by skin, occurring during the first eight days after birth, which M. Chaussier, an eminent French professor, has termed *Sclérème*, but which was first described in 1718 by Uzembesius of Ulm. The best description of it given in this country was by Drs. Denman and Underwood, and the best in France by M. Andry. It was ascribed by Underwood and Doublet, of Paris, to syphilis, erysipelas: was first accurately described by Andry, whose researches were the foundation of two successful memoirs by Auvity and Hulme, which were awarded prizes by the Royal Society of Medicine of Paris.

According to these authors, Underwood and Chambon, the disease attacks robust as well as feeble infants, whether nursed by the mother or a stranger. The disease is most common in winter, a fact also attested by Billard. It is often observed in Lying-in and Foundling Hospitals, as well as in private practice. It was termed *œdematic concrete* by M. Souville, of Calais. It may be general or partial. It is an induration which, according to MM. Baron and Billard, ought

to be classed among the dropsies of the cellular tissue or *œdemata*. It is caused by cold (*Troceon*) in the superior and inferior extremities, and may also attack the integuments of the chest and abdomen. The diseased parts are swollen, tense, and hard, of a violet colour, and retain the impression of the finger, or pit on pressure. Hulme states there is inflammation—it is sometimes followed by the species of tetanus termed *trismus*, locked-jaw, and *opisthotonos*, or bending of the body backwards. *Dyspnoea* supervenes, the voice becomes whispering, the thorax renders a dull sound on percussion, and the infant dies on the fifth or seventh day of the disease (Andry). It sometimes happens that the induration or hardening is dispersed by proper remedies, but that the *œdema* remains; and this is generally dissipated in fifteen or twenty days. In some cases the part inflames or suppurates (Gardien); fever follows, and the infant is destroyed in twelve or fifteen days (Hulme).

Congenital Concretion of the Cellular Tissue.—There is another form of this disease which deserves attention: it is what M. Chaussier terms the *concrete form*. The cheeks, limbs, fore arms, legs, abdomen, and thorax, become as hard as a tanned hide, or wood; they do not pit on pressure, and are as cold as ice. The skin is pale, yellow, or livid. The *trismus*, *opisthotonos*, feeble cries, moans, or whisperings, are more marked than in the former disease. The appetite and digestion are good for some time, but soon fail; and then green stools are observed, the strength is greatly reduced, and the infant is unable to suck. It speedily dies in a state resembling asphyxia, without emaciation; but if judiciously bled, it gradually loses the hardness; the tetanus is cured, unless pneumonia supervene after the disappearance of the *sclérème*, or original disease. It is important to know, that local inflammation is rarer in this than in the former species. M. Duges states, that he has sometimes observed suppuration follow, and an abscess communicate with the knee joint. It commonly happens, that *icterus* or jaundice generally accompanies this second form of *sclérème*.

The autopsy, or dissection after death, enables us to see the cellular tissue infiltrated with serosity in the first variety (Andry); it is also hard and concrete in the other species (Hulme and Marzari). There is a sanguinolent effusion in the brain; the *foramen anale* is more open than usual (St. Leger), the intestinal canal is shorter (Breschet,) or inflamed (Denis), &c. The disease may exist without these symptoms, or the symptoms may exist without the disease (Duges). This last able author informs us, that he has observed the brain congested, and the cerebellum covered with a slight layer of lymph—(arachnitis). He also found the stomach intensely inflamed; and in winter, hepatization of the lung, or pleurisy—diseases also ob-

served by Hulme and Marzari. But he has seen the disease in other winters, without these complications.—*Manuel Obstétrique, &c. Deuxième Edition, 1830.*

The best account of this disease I have met with, is that of M. Billiard. After an able analysis of the writings of Duges, Denis, Andry, Auvity, Breschet, Chevreuil, Hulme, Underwood, Baumes, Paletta, Leger, and others, he draws the following conclusions:—

1. Induration of the cellular tissue of new born infants, is a simple œdema, like that of adults. It may be local or general; it ought to be distinguished from œdema of the adipose tissue.

2. It is more common in winter than in summer, and more frequent in new born infants than those more advanced in age; and has for its predisposing causes—1. a natural feebleness; 2. a general and congenital plethora; 3. a superabundance of venous blood in the tissues; 4. a dryness of the skin before exfoliation: its direct causes are—1. an obstacle to the circulation of the blood, on account of the abundance of this fluid in the circulatory apparatus; 2. its engorgement in the cellular tissue, to which it furnishes too much materials for secretion; 3, and in fine, the action of external agents on the skin, which, without condensing the serous fluids, as it is said, are capable of suspending cutaneous transpiration, and of favouring the accumulation of serosity in the cellular tissue. Sanguineous infiltration of the liver, lungs, or heart, the persistance or occlusion of the foetal apertures, are not the exclusive and indispensable causes of this affection; we should only consider them as concomitant phenomena—as accessory circumstances.

3. When the œdema is general, and the serous congestion is extreme, all parts of the cellular tissue may have their functions disturbed. Then the glottis may become œdematous, the lungs congested, and the cries of the infant become feebly shrill and impeded. The condition of the circulation easily explains the coldness of the extremities, and the prostration or enfeeblement of the patient. It also explains the other symptoms described by authors.

4. The indications of treatment are—1. to combat, by sanguineous evacuations, general plethora; 2. to excite the skin by irritating frictions, woollen clothing, and vapour baths, so as to establish cutaneous transpiration. M. Baron prefers frictions and woollen clothing to vapour baths, which often cause pulmonary and cerebral congestion. M. Billard has observed the best effects from woollen clothing. He states that the disease is not necessarily fatal, unless complicated with affections of organs essential to life.—*Traité des Maladies des Enfants, &c., Deuxième Edition par M. Ollivier, Paris, 1833.*

Treatment.—In addition to the preceding remedies, the milk of a healthful nurse and vapour baths are perhaps the best remedies.

Six or eight baths, at the temperature of 85° or 90° every day, have been employed with advantage. The infants are often in good health, and have a good appetite. Woollen clothing is also indispensable; warm and medicated baths are also useful. Dry vapour baths are seldom sufficient. Andry advised blisters, but these are inadmissible when the skin is inflamed, and are only justifiable in pure œdematous, or concrete sclérème, after all other remedies have failed. Gardien and Lasses recommended fumigations of gum ammoniac dissolved in vinegar, thrown on red-hot iron or live coals, the parts being enveloped in wool. This remedy was first proposed by Galen and the Greeks, and a modification of it is even yet employed in indolent swellings. But the resolvent power of the following remedies is much greater. When inflammation exists, leeches and ordinary antiphlogistic remedies should be employed. When the disease becomes chronic, and inflammation is absent, stimulating liniments, iodine, frictions and baths, moxas, and blisters, as in chronic phlegmasia dolens are advisable. An ointment composed of a scruple of proto-ioduret of mercury, or ioduret of lead, to an ounce of simple cerate, rubbed on the affected parts, in the proportion of a drachm night and morning, would most probably excite absorption. Some of the iodureted preparations, and the means used in dropsies, might be employed, at the same time, with advantage. It is always to be remembered, that there are some cases wholly incurable.

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A NEW PRACTICAL FORMULARY OF HOSPITALS, OR A

Collection of Formulæ of the Civil and Military Hospitals of France, Germany, Italy, Great Britain and Ireland, &c., containing the Indication of the Doses in which simple Substances, magistral and officinal Preparations of the Codex are administered, the use of New Medicines, and general receipts on the art of prescribing. By M. EDWARDS, M. D., and P. VAVASSEUR, M. D., of the Hospitals of Paris—1834. Translated and augmented by M. RYAN, M. D. &c. &c.

(Continued from p. 143.)

DIURETICS.

Pariétaire.

The diuretic effects of this substance are not very active. It was formerly much used in inflammatory affections of the urinary organs.

INTERNALLY.—Decoction manip. j—Oij of water.

The *Decoction de Pariétaire* of the Hot. D. contains \mathfrak{z} j of the plant to the above quantity of liquid.

Distilled water of Pariétaire. P. \mathfrak{z} ij— \mathfrak{z} iv as a vehicle for diuretic potions.

EXTERNALLY.—Decoction in enema.

Enema of Pariétaire. H. de la Ch.

Rx. Pariétairæ, 3 ss;
Aquæ, Oj.
Coque, cola, et adde,
Potassæ acetatis, 3j.
Fiat enema.
Employed in dropsies.

UVA URSI.

A diuretic. Much used in calculous complaints, and ulcerations of the urinary organs, gonorrhœa, &c.

INTERNALLY.—*Powder.* ʒj—3j. Not much used.

Infusion and decoction. From 3ij—iv in Oij of water.

Decoction of Uva Ursi. H. of Germ.

Rx. Uvæ ursi, 3 ss;
Theræ, 3j;
Acaciæ veræ, 3j;
Aquæ, 3ij.
Coque, cola, et adde,
Mellis, 3vj.

Hujus decocti sumat cochleare magnum quater, vel sexies, in die.

Diuretic Infusion.

Rx. Uvæ ursi,
Baccarum juniperi, ā ā 3 ss.
Macerā in aquæ ferventis, Oij.
Cola, et adjice,
Syrupi simplicis, 3ij.

Fiat infusum, cujus sumat cochleare amplum ter in die.

Lithontriptic Powder. H. of America.

Rx. Pulveris uvæ ursi,
— — — cinchonæ, ā ā 3ij;
Opīi, gr. iij.

Divide in chartulas vj, quarum sumat unam ter, quaterve in die.

3ij of lime-water should be taken immediately after each dose.

PARSLEY (ROOT).

A slight diuretic, united sometimes with other substances which possess the same qualities.

INTERNALLY.—*Decoction.* 3 ss—j in Oij of water.

Diuretic Decoction.

Rx. Radicis petroselini, 3i;
Seminum dauci sylvestris, 3ij;
Parietaræ, 3 ss;
Aquæ, Oiv.
Coque, ad dimidium, cola, et adde,
Potassæ nitratis, 3j.

Hujus decocti, cyathus pro dosi sumendus.

The roots of small-age, pariera-brava, the caper-tree, wild carrot, and others of the same species, possess slight diuretic properties, and may be employed in the same cases as the preceding substances, in infusion or decoction, in doses of 3ij—iv, in Oij of water.

The *Espèces Diuretiques* of the *Code* are

composed of equal parts of the following ingredients:—

Rx. Radicis fœniculi,
—— musci,
—— asparagi,
—— petroselini.

The dose of this mixture is 3j to Oij of water, either in infusion or decoction.

CHAPTER VI.

MEDICINES WHICH ACT PRINCIPALLY UPON THE CUTANEOUS SYSTEM—DIAPHORETICS, &c.

SULPHUR.

INTERNALLY, in large doses, this substance is a purgative; in smaller ones it is a general stimulant, exercising a special influence on the cutaneous system. It is used as a general stimulant in certain cases of scrofulous swellings, œdema, catarrhs, and paralysis produced by mercurial or saturnine vapours. Its action on the skin is considered as very useful in scabies and other cutaneous affections. It is also used externally in a great number of diseases of the skin.

[It is said to be the best remedy for painters' colic. T.]

INTERNALLY.—As a purgative, the dose is 3i—iij in milk or an electuary.

As a stimulus, grs. xij—ʒj twice or thrice a day.

Pustilles Soufreés, P. 3j—iv. Employed principally in scabious affections.

Tablettes de Soufre Comf. P. 3 ss—ij. Used in the same cases.

Baume de Soufre. P. gutt. x—xx. Not often used internally.

Baume de Soufre Anisé. P. gutt. v—x.

Antipsoric Powders. H. of Germ.

Rx. Sulphuris,
Glycyrrhizæ, ā ā 3vi;
Camphoræ, 3 ss.

Divide in chartulas xij, quarum sumat duas quotidie.

Diaphoretic Powders. H. of Lyons.

Rx. Sulphuris, 3iv;
Camphoræ, ʒi.

Fiant pulveres xij quarum capiat unam vel duas in die ex cyathothecæ.

Anticatharrhal Powders. H. of Germ.

Rx. Sulphuris, 3ij;
Potassæ supertartratis, 3vi;
Sulphuris antimoniatī fuscī, gr. xv.

Divide in chartulas xvj, quarum capiat unam quartā quaquā horā.

In chronic pulmonary catarrh.

Antipsoric Boluses.

Rx. Sulphuris, 3j;
Saponis medicinalis, 3 ss;
Syrupi gentianæ, q. s.

Fiant boli iv é quibus sumat unum mane nocteque.

Sulphur Bolus. H. Militaires.

Rx. Sulphuris, gr. viij;
Mellis, q. s.

Fiat bolus.

Compound Bolus of Sulphur. H. Militaires.

Rx. Sulphuris;
Pulveris anisi, ā ā gr. viij;
—— sennæ, gr. iv;
Mellis, q. s.

Fiat bolus.

Boluses used in Inflammation of the Bladder.
H. of Italy.

Rx. Sulphuris, 3j;
Olei terebinthinæ, ʒij.

Divide in bolos sex, ē quibus, capiat j
tertiā quaquā horā.

Sulphuretted Opiate. H. of Paris.

Rx. Sulphuris, partes tres;
Mellis, partem unam.

Misce 3ss—j capiat quotidie, vel bis in
die.

Laxative Electuary.

Rx. Sulphuris, 3iv;
Confectionis sennæ, 3iss;
Syrupi rosarum, q. s.

Fiat electuarum cujus capiat cochleare
minimum ter quaterve in die.

Sulphuretted Potion. H. of Germ.

Rx. Sulphuris, 3ij;
Aque fœniculi, 3iij;
—— cinnammomi, 3j;
Syrupi papaveris, 3ss.

Fiat potio, cujus detur cochleare unum
omni horā.

In diabetes. The bottle should be well
shaken each time the medicine is administered.

Expectorant Loach. H. of Germ.

Rx. Sulphuris, 3j;
Sacchari, 3ij;
Olei lini, 3j;
Syrupi toluiferæ, 3jss.

Misce. Dosis cochleare, magn. bis in die.

Administered in catarrhs of long standing.

EXTERNALLY.—In lotions, 3j—Oj dis-
solved in Oʒ of water.

Onguent Soufré pour la Gale. P. Much used
in scabies.

Onguent Soufré Alcalini. P. In the same
cases.

The *Pommade Sulfuro Alcalini* of the H. St.
L. does not differ from the preceding pre-
paration.

Antipsoric Powders. H. de la Mat.

Rx. Sulphuris,
Plumbi acetatis, ā ā 3j;
Zinci sulphatis, 3ss.

Misce.

A small quantity of this powder, with a
few drops of oil added, is used in frictions
on the palms of the hands morning and
evening. It is very convenient in the
treatment of scabies, as by its use the bad
odour, &c. of other preparations are avoided.

Lotion Sulphuro-Savonneuses. H. St. L.

Rx. Sulphuris,
Saponis duri, ā ā 3j;
Aque, Oʒ.

Liqua saponem in aquā, cola, et adjice
sulphurem.

Employed with success in the treatment of
scabies; it sometimes produces red spots or
pimples, which soon disappear by discontinuing
its use.

Sulphuretted Cerate. H. of Eng.

Rx. Sulphuris, 3iv;
Cerati simplicis, ʒbj.

Misce.

Used in frictions in scabious affections.

The *Onguent Soufré* of the H. des Ven. con-
tains double the quantity of sulphur.

Pommade used in Scabies. H. St. L.

Rx. Sulphuris, 3v;
Potassæ subcarbonatis, 3ij;
Aque, 3j;
Olei olivæ, 3iv.

Liqua potassam, adjice oleum et deinde
sulphurem.

Used with success as an antipsoric; it has
the advantage of not soiling the linen, and has
no odour. It generally effects a cure in thir-
teen days.

Pommade Sulphuro-Savonneuse. H. St. L.

Rx. Sulphuris,
Saponis albi, ā ā ʒbj.

Liqua saponem in aquā, cola, et adjice
sulphurem.

Used with success in scabies; it does not
soil the linen, and effects a cure in ten days.
The red pimples these frictions occasion gene-
rally yield to the use of tepid baths.

Antiherpetic Pommade. H. de la Ch.

Rx. Sulphuris, 3ij;
Hydrargyri submuriatis, 3j;
Adipis, 3j.

Misce.

Employed with advantage in herpes.

Pommade used in Tinea Capitis. H. de Mont.

Rx. Sulphuris,
Pulveris carbonis ligni, ā ā 3ij;
—— sennæ,
—— cinchonæ, ā ā 3j;
Cerati simplicis, q. s.

It is used as an unction for the head.

SULPHURIC ACID.

When respired in a large quantity in a
gaseous state, it causes instant death; in
smaller quantities, it irritates, in a lively
manner, the respirative organs: applied to
the skin, it stimulates that membrane, and
is employed with success in cutaneous af-
fections. Dissolved in water, it is some-
times administered as an astringent and sti-
mulant. It is used externally in lotions, in
diseases of the skin and atonic ulcerations.

INTERNALLY.—Dissolved in water, gut.
xx—lx in Oj of vehicle.

Baths of the Vapour of Sulphur:

The patient is placed in a box, the head

uncovered, into which the vapour arising from sulphur, placed upon a piece of iron made red hot, is introduced. The quantity of sulphur generally employed is ʒ ss.

SULPHATE OF POTASSA.

An energetic stimulant. In large doses it is a violent poison; in small ones, it is a stimulant of all the organs, but more especially of the skin, the lungs, and the organs of circulation. It is employed in cases of chronic cough, obstinate hooping-cough, the croup, chronic rheumatism, &c., but especially in obstinate tetters. It is used externally in herpetic, scrofulous, and rheumatic affections.

INTERNALLY.—Gr. vi—xviiij in Honey, or in pills with soap.

Sirop. P. ʒ ij—ʒ j, and even ʒ ij; each ounce contains about gr. xij of sulphur.

The *Sirop de Sulfure de Potassæ* of the H. de la Mat. contains about half the above quantity of sulphur.

Sulphuric Potion. H. of Germ.

℞. Potassæ sulphatis, ʒ j;

Aquæ, Oj;

Sacchari, ʒ ij.

Fiat potio cujus capiat cochleare magnum.

Recommended in poisoning by arsenic.

Pills of the Sulphate of Potass.

℞. Potassæ sulphatis, gr. xv;

Saponis medicinalis, ʒ j;

Balsami peruviani, q. s.

Fiat massa, in pilulas xxx distribuenda, ex quibus sumat ij, quartâ quaquâ horâ.

Employed in cutaneous affections; also recommended that a cupful of the hot infusion of juniper berries be taken a quarter of an hour after them.

Pilules de Charbon Alcalines. H. of Germ.

℞. Potassæ sulphatis, ʒ j;

Extracti cardui benedicti,

Pulveris carbonatis ligni, aa ʒ ij.

Fiat massa, in pilulas gr. ij distribuenda, quarum sumat xv—xx, quater in die.

In pulmonary phthisis.

Each pill contains gr. jss of sulphur.

Boluses used in Mercurial Salivation. H. of Italy.

℞. Potassæ sulphatis, gr. iij;

Succi sambuci, q. s.

Fiant boli sex, quarum sumat unum, tertiâ quaquâ horâ.

Powders used in Mercurial Salivation.

℞. Potassæ sulphatis, ʒ iv;

———— supertartratis, ʒ iv.

In chartulas xxiv, divide quarum sumat unam bis in die.

Each packet contains gr. iv of sulphur.

EXTERNALLY.

Liniment Sulfuro-Savonneux. H. des Enf.

℞. Potassæ sulphatis, ʒ iij;

Saponis duri,

Olei olivæ, aa ʒ ij;

— thymi, ʒ j.

Dissolve the sulphur in a third of its weight of water, liquefy the soap in a sea-bath, and add the oil by degrees; mix the whole well together.

Employed as an antipsoriac, and in the treatment of several other cutaneous affections.

Pommade used in Tinea-capitis.

℞. Potassæ sulphatis,

Sodæ subcarbonatis, aa ʒ ij;

Adipis, ʒ viij.

Misce.

The head should be rubbed daily with this pommade, the hair having been cut and removed by cataplasms; it should then be covered with blotting paper. When the pommade does not act with sufficient energy, the quantity should be increased.

Sulphur Baths of Bareges. H. of Paris.

℞. Potassæ sulphatis, ʒ iv;

Aquæ, Occ.

Employed daily in diseases of the skin, certain nervous affections, &c.

The *Bain Sulfureux* of the H. des Enf. only contains half the above quantity of sulphur.

The *Bain Antipsonque* of the H. of D. contains a pound of sulphate of potass. This is one of the numerous means employed in the treatment of scabies.

The sulphate of soda possesses the same properties as the sulphate of potassa, but it is not so active. It is not often used.

The sulphate of lime is not used in France, but in Germany it is employed in the same cases as the preceding substances. It is frequently preferred for the preparation of sulphurous baths, on account of its cheapness. It is administered internally in doses of grs. iv ad xij.

HYDROSULPHURIC ACID.

When respired in a large quantity, it causes instant death. Externally, it is an energetic stimulant of the skin, and is employed in diseases of that tissue.

—o—

Review.

Traité des Hémorrhagies Internes De l'Uterus, &c. Par A. C. Baudelocque, M. D., &c. Bruxelles, 1832. *Treatise on Internal Uterine Hæmorrhages.* By A. C. Baudelocque, M. D., &c. Brussels, 1832.

This work is constructed on the principle of the *clinique*—the best possible form for practical books on medicine, and which it were to be wished that British medical authors would more frequently adopt, to the exclusion of those mystifying generalities, which may be very true for ought anybody knows to the contrary. The merits of M. Baudelocque, as an obstetrical practitioner and writer, are sufficiently known to render

commendation unnecessary; the work before us was, moreover, honoured with the prize of the Parisian faculty of medicine in 1819; we shall, therefore, make this article rather a collection of excerpts than a critical review. The first chapter treats of the several situations in which internal uterine hæmorrhage may occur.

I. During the period of gestation blood may be effused.

1. Between the uterus and epichorion; this is the most frequent cause of abortion in the earlier stages of pregnancy.

Case.—A woman of a nervous temperament, four months and a half gone with child, perceived that her urine was mixed with mucus slightly tinged with blood; her health in other respects being perfectly good. This appearance could only be attributed to repeated sexual intercourse immediately previous to its occurrence. A small bleeding from the arm was practised, and absolute rest prescribed. Every thing went on well till the end of the sixth day; during the night of the seventh, labour pains came on, and the ovum was expelled at the end of six hours. The child was alive. The placenta was five inches long, by two inches broad, and the inferior third of its uterine surface was covered with a very solid layer of black blood, from eight to ten lines thick. (*Journal Gén.* t. 68, p. 339).

2. Between the epichorion and chorion.

Case.—The Countess ———, aged 28, having been married six years, had a miscarriage, soon after which she again became pregnant. The day on which the menses should have appeared she experienced severe colic pains, which continued from seven to eight weeks, notwithstanding the observance of complete repose. Frictions of ice on the lumbar and sacral regions were used without success. Five days after the third menstrual period, it was determined to practise venesection, since the colic pains were now attended with external hæmorrhage. Abortion took place at the expiration of forty-eight hours. M. Deneux, who was now called in, examined the product of conception, and found, beneath the epichorion, a layer of coagulated blood of a very high colour, a line and a half thick at the sides, and five or six at the two ends. The embryo was of the size of a fly, and was be-

lieved to have died six weeks after conception. (*Journal cité*, t. 68, p. 355).

In this case extravasation of blood must have taken place round the ovum at the time when the colic pains first occurred, at which period, also, the foetus ceased to live, as evinced by its state of development. The pains, occasioned at first by the menstrual turgescence, were afterwards kept up by the distention of the effused blood; or, the extravasation may have already taken place at their commencement. "It is difficult to conceive," observes M. Baudelocque, "with what intention the frictions with ice were used—there was doubtless some error of diagnosis."

3. Between the chorion and amnios; of which no cases are detailed, but the author states that Professor Deneux has shown him several distinct examples, and that Dr. De Kergaradec found a fibrinous concretion between the chorion and amnios, near the insertion of the umbilical cord into the placenta.

4. Between the placenta and the uterus; of which the first case cited in this article may serve as an example: the following is a fatal instance of a similar accident.

A woman thirty-six years of age, who had borne several children, was troubled, in the eighth month of pregnancy, with violent cough and fever, which continued for several days. Labour-pains came on, and after twelve hours, the midwife who was in attendance observed the patient to fall into a alarming state of syncope. M. De Laforterie was called in, but the patient died before his arrival. He performed the Cæsarian operation. On opening the fundus of the uterus a pint and a half of black uncoagulated blood gushed out, which had been contained in a cavity formed between the placenta and fundus uteri, the middle of the placenta having been detached, while the adhesion of the margin remained firm. No trace of blood was found in the vagina, and the os uteri was little dilated. The child was extracted alive, but soon died—*Journ. Gén.* t. 29. p. 384.

Some of the vessels passing between the uterus and placenta appear to have been ruptured during the fits of coughing. The pains must have been caused by the distension of the womb, since the state of its ori-

fice and of the regimen shows that real labour had not commenced. The fact of the child's being alive proves that the blood came from the uterine not the placental vessels, and also that its extravasation was recent.

5. Between the uterus, placenta, and external surface of the tunica decidua and chorion; this however is merely a combination of cases already noticed.

6. In the substance of the placenta. This, our author remarks, is a very frequent accident in the early stages of pregnancy; it happens however occasionally at more advanced periods, as in the following:

Case.—Madame F——, aged 32 or 33 of a lymphatic and nervous temperament, was subjected to a severe fright at the end of the ninth month of pregnancy. The movements of the child, which had previously been very active, immediately ceased. This took place on the 3rd May, at 8 p. m. During the 4th and 5th, she experienced an unpleasant sensation of weight and *déplacements de totalité* whenever she changed her position—we leave the reader to interpret this phrase for himself; it appears to us rather too vague for scientific language. In the night of the 5th, slight fever supervened; the breasts swelled, and at the end of 24 hours contained a great quantity of milk. From the seventh to the twelfth nothing remarkable happened; the patient only complained from time to time of pains in the region of the kidneys. On the night of the 13th, the pains grew more frequent and severe; they soon became expulsive, and delivery took place at five in the morning, without any hæmorrhage. The child was dead, and the epidermis was easily to be detached. The placenta was naturally expelled; it was covered in a third of its extent by a mass of black and very firmly coagulated blood. The umbilical cord, towards its insertion into the placenta, was ecchymosed in an extent of three inches; the blood that formed this ecchymosis appeared to come from the principal clot, which occupied not only the centre of the uterine surface of the placenta, but also several of the intervals between its lobules. (*Journ. Gén., t. 68, p. 339*).

7. Between the umbilical vessels and the

membranes surrounding them; in which case the blood may be either in a single clot or infiltrated.

Case.—A woman was naturally delivered, at the full time, of a dead child, around whose neck the cord, fifty-two inches in length, was six times twisted. At the distance of a foot from the umbilicus a coagulum of blood eight or ten lines long was found between the membranes and the vessels of the cord; it had been effused from a rupture in the umbilical vein, which was varicose in several places. (*Deneux, Journ. Gén., t. 63, p. 361*).

This case exemplifies a singular cause of the death of the child. M. Baudelocque believes it to be unique; he observes, however, that De Lamotte, Levret, and Baudelocque (senior), have recorded instances of effusion into the cavity of the amnios, in which the blood proceeded from the umbilical vessels.

7. The cavity of the amnios.

A case is related by M. Coutèle, in which pregnancy was mistaken for *ascites*, and paracentesis was performed! (*Constitution Med. de la ville, d'Albi, part 2*). We presume the operator was a *pure*; midwifery is beneath a surgeon. This, however, ought not to have been introduced among natural cases of internal hæmorrhage: if all the accidents caused by the blunders of anti-obstetrical surgeons were recorded, we should have a queer pathology.

8. In the cavity of the peritoneum, which may occur at any period of gestation.

Case.—A woman in whom the menses had not appeared for six weeks, had a fall upon her knees, some hours after which colic pains came on, and continued with violence for twenty hours, when the menses returned, and the pains were somewhat abated. M. Littre, who was called in on the third day, found the patient pale and covered with cold clammy perspiration. The abdomen was distended, the breathing laborious, and the pulse small and intermittent. The patient complained particularly of constriction of the chest, and of acute pains in the left iliac region. Death soon occurred. A foetus, about an inch long, was found in the abdomen, and more than four pints of blood,

which had been effused from a laceration in the left fallopian tube. (Mem. de l'Académie des Sciences, an. 1701).

II. During the process of parturition, blood may be extravasated.

1. Between the uterus and the external surface of the placenta and membranes.

Albinus relates a fatal case in which the effused blood formed a cavity for itself by detaching the central portion of the placenta, while the margin retained its adhesion as in the instance just alluded to, which occurred to M. Delaforterie. "Had the nature of the case been understood," observes Albinus, "the patient might have been saved by rupturing the membranes and delivering immediately." (Annot. Acad., Lib. i, c. 10, p. 98).

2. In the substance of the uterus and cavity of the abdomen.

An example is acted upon from Schmucker's *Mélanges des Chirurgie*, which M. Baudelocque observes stands alone in the history of the science.

A woman became pregnant six months after a Cæsarian operation, from which she had perfectly recovered. She was brought to bed at the full time, almost without pain, of a dead child; six hours after, she fell into a state of syncope, and died. On dissection, a mass of coagulated blood was found under the peritoneal coat of the uterus, and distending this membrane into a sac, whose parietes were traversed by varicose vessels opening on its internal surface. There was a hole in the sac, through which the blood had escaped into the abdomen. The cicatrix resulting from the Cæsarian operation she had undergone was firm and uninjured.

3. In the cavity of the amnios; cases of which are recorded by Levret and Baudelocque, senior, but the source of the hæmorrhage in these instances has been disputed by others; we therefore omit them.

(To be continued.)

The London Medical

AND

Surgical Journal.

Saturday, March 7th, 1835.

THE LIVERPOOL MEDICAL INSTITUTION.

Hæc ego non credam Venusinâ digna incernâ?

Hæc ego non agitem?

Juvenal, Sat. 1, 51.

We happen to have some acquaintance with the state of medical tactics at Liverpool. We are aware that the whole profession is looked down upon by the purse-proud merchants of that town; that, like tradesmen, the very physicians are required to send bills for attendance, and that other indignities are inflicted, unworthy both the patient and his professional man. One portion of the profession yield to this systematic insolence, take the crumbs that are thrown at them, and bless God that they have such bitter food. Another portion, though the chances of practice may thereby go against them, make that stand on their professional dignity, from which, were they well seconded, better fees and greater weight in the social body would accrue to them.

The characteristics of these two sections of the Liverpool faculty have been tolerably well developed in the late meeting, held there for the purpose of erecting a building for *their own* social and scientific purposes—a report of which is given in our last number. The faculty of the town petitioned the committee of the Royal Institution for a grant of land adjoining the latter, on which to erect the proposed building. The committee agree to make the grant, *provided* the building so erected shall be by legal deed invested in them, the property therein contained inalienable (that is, not removeable from the edifice), and themselves and those whom they think proper to introduce, free at all times to enter the premises. These provisos, our readers will agree with us

in considering "most tolerable and not to be endured." Not so, however, certain persons who figured at the meeting in question. One long-suffering son of earth, a lamb that would

"Lick the hand upraised to slay,"

meekly tells the company that "*all that the proprietors of the Royal Institution seemed to claim was simply that they, and none else, should be the owners and trustees of the property, legally considered. Had they even,*" pursues the speaker, "claimed, in the same spirit and sense, a right to the property of the medical library" (we may mention to our readers that this library has been many years in existence in another locality) "there could be no objection (!) but one of *mere feeling, even to that.*" Exactly, my friend; it is the *feeling* we insist upon: the Royal Institution committee may assuredly be trusted with their own property; they appear to be sharp lads, and to be acquainted with

..... "the plain and simple plan,
That they should get who have the power,
And those should keep who can."

If the medical men of Liverpool can gulp this grovelling and stolid argument for prostrating themselves in the dust, they deserve all the spurning which the ignorance or the insolence of the committee may please to confer upon them. And if the majority of them can sink the *feeling* of self-respect, and substitute that of dependance and degradation, give up the library they now possess, and the museum they intend to form, for the paltry gift of a piece of land, value 240*l.*, they prove themselves egregiously bad financiers, and grievously narrow-minded members of a liberal profession.

Another orator—a Fellow of the Pall Mall College, a Cantab., and one therefore who is supposed, or supposes himself to have had the exclusive advantage of a previous general literary education, comprising, we presume, a

classical acquaintance with his mother *English*—took the same time-serving view, and expressed himself in the following beautifully eloquent terms:

"Mr. Chairman, I have really very little to say *at all*; and as I have been so short *a while* in the room, perhaps I ought to say nothing *at all*. But since I am upon my legs, I will observe, that *if* the profession *can carry* this work on by themselves, let them do so—*provided they can*. If they cannot, *which* is my opinion, then it will be as well that they connect themselves with the Royal Institution; for, unless so connected, the public at large will not support them in their undertaking."

The remainder, that is, the majority of the speakers, however, we are happy to see, maintained the contrary propositions to those above quoted. Among these we rejoice, though we are not at all surprised, to observe the honoured name of Carson. He took the lead in the development of the objections to the grasping policy of the Royal Institution committee; and was followed by Dr. Jeffreys, who proposed the formation of a committee to confer with that of the Royal Institution—a motion that was eventually carried.

Our readers may ask wherefore the *exigeant* proposal of the Royal Institution came to be entertained at all, and to find supporters among men of supposed education and high-toned feeling. The question is answered by the fact that the shareholders of the Royal Institution are composed of the greater number of the influential merchants and bankers of Liverpool—a fact, we have every reason to *suspect*, known to those who supported the proposals of the shareholders.

Meantime, we hope and believe that the Liverpool faculty will assert their own dignity by holding no longer conference on proposals so fraught with illiberality and the spirit of extortion. Should such be entertained and carried, the degradation of the profession will

be perpetuated. Do they meet in their building for the discussion of any subject which happens to be disagreeable to any Royal Institution shareholder, the latter has only to introduce a given number of friends, and mar the proceedings. Should they, for instance, meet to discuss the best mode of associating for the purpose of obtaining better remuneration for their attendance—a desideratum, we can assure our readers, in Liverpool practice—the introduction of a mischievous or malignant set of persons to render the intention abortive, would meet with no obstacle. Let the Liverpool faculty exert their ingenuity in supposing cases in which the powers granted to the Royal Institution might work to their annoyance and disadvantage: they will find such in abundance. Let them be certain that the straightforward path of proper self-respect is in the main most conducive to their welfare in practice, and their influence in the community. To medical men who think otherwise, to practitioners of vulgar minds and cringing habits, we would recommend the advice of the Gallic Horace, contained in the following lines:

“Soyez plutôt maçon, si c'est votre talent,
Ouvrier estimé dans un art nécessaire,
Que *medecin* commun, et *docteur* vulgaire.”

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THE RHABBARBARIANS.

IN our last number we gave these worthies a slight switching with the tail of our leading article. We prophesied their evaporation into thin air: the following remarks may be given as the *rationale* of that interesting process.

There is one consequence of medical reform to which we look with peculiar pleasure; we allude to the curtailment of the powers held by the non-descript Company of Union Street, Blackfriars. That this will follow upon any *real* reform of the College of Physicians there can be no doubt. For, granting

that the cant about the “average improvement of the general practitioners” be taken as an argument for the continuance of their ill-gotten charter, and their impudent intrusion into the ranks of the profession, yet of what avail will these be if the cleansing of the College of Physicians be effected—if that *once* honoured precinct again become a locality where all may register their names who come with the recommendations of talent and education. Suppose the ingress to that College facilitated as to the qualifications of local habitation and name, though rendered more difficult and therefore more honourable as to the mental qualifications of the candidate, can it be for a moment doubted that each and all will prefer to style themselves members of such a body, rather than come forth as the licensed dispensers of a hybrid trading company? Add to this, if the tight laced etiquette of the present system of medical fees be abrogated—if it be pointed at as no social degradation to accept a smaller fee than the certainly enormous one of a guinea—we see no possible salvation for this piebald society of medico-druggists. Reform of *them* would, in such event, be a work of supererogation—it would but strike a falling body—they would die of sheer inanition, of a dearth of candidates, of a famine of diploma-fees. Revolving Thursdays would present themselves, but not “big with the fates” of a dozen trembling candidates, as in past and present halcyon days. In vain would the fresh botanical specimen be plucked; in vain would the dusty herbarium be produced, the often exposed coloured plates be “laid on the table,” the well worn pharmaceutical preparations be placed in order in their bottles and compartments, to dismay and puzzle the expected examinee! To no purpose would the clerk fill up the blank diplomas, the spruce beadle be in waiting to usher the joyous licentiate to the presence of the now no longer formidable

coterie, seated round their half-moon table! Instead of the condescending approval addressed to the successful, or the rough, ill-bred rebuke to the dejected rejected one, these lords of the pestle and mortar will be seen wandering about their hall, like the discontented ghosts in Virgil's hell, and will be heard only to utter the acknowledgment of their past greatness in the suspiratory syllables "fuimus! fuimus!"

And who shall mourn over them? Not the Fellows who, after years of "cawing" with, after years of successful play into, the hands of these tradesmen whom they ever scorned; now that power has knocked at their own doors, and given the word of command—"Reform"—they will gladly throw their old allies overboard, and come into measures whose effect upon the Apothecaries' Society we have already predicted. Not the surgeons, between whom and the people of Union Street, it is well known no love was ever lost; in the sight of the latter, the College of Surgeons was ever what the Arab is to the sight of the Catholic Musselman—an object of hatred. Not the licentiates of their own body; for which of them cares a straw for the physicians about the hall, after he has paid his diploma-fee? Nor can the public regret what must be an improved change for them, in the eventual substitution of real professional men for persons authorized to charge for the amount of physic they *choose* to send, and not for the quantum of skill they *are able* to exhibit. On all hands we shall hear gratulations rather than condolence, and the only wonder, the only drawback to the felicitations on the event, will be that a body so devoid of the requisites of settled dignity and fixed character, should have lorded it insolently over the whole profession during twenty long years!

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STATISTICS OF THE PARISIAN HOSPITALS.

From official returns lodged at the bureau of the Prefect of the Seine, it appears that the receipts of the Parisian Hospitals, for the year 1833, amounted to 10,186,388 francs, (nearly £408,000), the whole of which appears to have been expended. The principal receipts are from rents (*loyers fermages*), 1,136,271 francs: government grants (*rentes sur l'état*), 4,201,472 francs: from the city of Paris, 5,238,000 francs. The lowest item of receipt is individual aid (*rentes sur les particuliers*), 11,000 francs: the income from the Monte-de-Piété or licensed pawn-shops, 281,970 francs: from the theatres they draw 60,000 francs: they also draw 400,000 from the departments, for the support of the maternity section of the hospitals, it being presumed that the little foundlings are not all of Parisian parents.

Of the expenses, the chief head is that for food and treatment of the poor, (for be it remembered, that many patients in the French hospitals pay for their maintenance and medical treatment, the item of receipts for this being 386,100 francs), amounting to 3,627,906 francs: then comes out-of-door assistance, 1,516,025 francs: foundlings and orphans, 1,450,000: materiel, bed-clothes, &c., 1,381,478 francs, and expenses of management, 1,135,442 francs.

The localities for relief are of three kinds. First, the hospital establishments, 24 in number: of these 13 are hospitals or establishments for the sick, and contain 5,337 beds; and 11 are infirmaries (*hospices*) for the old and infirm, as also for orphans, in which 11,740 persons may be maintained. The total of the beds of these hospitals and infirmaries is 17,077. The second kind of relief is afforded at certain asylums and schools: the number relieved by this means in 1833, was 68,986.

The third class includes the foundlings.

On the 1st of January, 1833, the number in the hospitals was 4,170, and there entered during the year, 61,765. At the same date there were 9,547 in the infirmaries, and during the year, 3,190 entered them. The number of foundlings and orphans, on the 1st of

January, in their respective places of charity, was 17,433, and during the year, 5,693 deserted children, and 1,760, passed from the *Bureau des Nourrices*, were received. Add to the above the 68,986 relieved out of doors, and we have a total of 172,564 succoured by the funds of the Parisian hospitals.

With regard to the individual expenses of the patients, the number of days included in the treatment of the patients in the hospitals was 1,616,403, for which the expense was 2,609,249 francs: taking the average, therefore, the expense of each day is 1 franc, 63 centimes, 51 milliemes. The average period of sojourn of each patient being 23 days, each one was maintained at an expense of 38f. 20c. The number of deaths was 5,886 or 1 in 11 1-80ths. In the infirmaries the deaths were 1 in 6.08: in them also the average expense of the day was 90c. 42m. The cost of each foundling was 74f. 43c. per annum.

The expenses of out-door attendance was 2,288,177; dividing this sum by the 68,986 so relieved, the average for each will be 33 francs, and dividing it by the number of households (*menages*), which are 31,723, we have 72f. 13c. for each. In these households there were reckoned 16,167 men, 28,021 women, 12,096 boys, and 12,702 girls. The heads of these households were 13,173 married, 12,875 widows, 4,350 unmarried, and 1,325 deserted females.

From all these calculations, the indigent population would be to the whole population of Paris, (estimated at 770,286 in 1833), as one to eleven.

These statistics no one can deny are useful in a national as well as medical point of view. Moreover, they evidence to the public the strict manner in which the funds for the support of the hospitals are appropriated to the uses—and only to the uses—for which they were intended. But with us—!

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Hospital Reports.

NORTH LONDON HOSPITAL.

Spontaneous Gangrene.

SARAH ARNOLD, aged 75, was admitted into ward No. 1 of this hospital on the 26th of January of the present year, under the care of Mr. Liston. She has been much exposed to cold and wet, from following her usual occupation, which is that of a water-cress seller. About

six weeks ago, after having been exposed as usual, she was seized with rigors; two or three days after this she began to complain of slight pain, with clenching of the fingers; they at the same time became discoloured at the tips, and sensation in them became much impaired. No remedies were then employed; the discoloration continued to extend, and about a week after its commencement had passed the wrist; the hand had become dry and shrivelled, and motion and sensation were completely lost in it.

A medical man was now called in, who made use of some local application to the arm, and gave some medicine internally, but without any good effect; and in about a fortnight from her first seizure, the disease had reached a little way above the middle of the arm—there it stopped.

At present there is a well-marked line of separation between the living and gangrenous parts; and suppuration has commenced on the inner side of the arm, at which part the disease has extended a little higher up than on the other. There is slight pain, and that is chiefly referred to the living parts in contact with the diseased. The powers of sensation and motion are completely lost in the affected parts, and the whole hand is dry and shrivelled, but she complains of a disagreeable, trifling pain in the fingers. Above the wrist, the arm is soft and flaccid, the pulse cannot either be felt at the extremity, or at the axilla.

She complains much of debility, but her system seems to be but little affected. Her appetite is good; the skin is moderately warm; pulse in the other arm 70, and of good strength; tongue moist and clean; sleeps little.

Haust. cum solutio. mur. morphinæ.

M. xxv. h. s. s.

Sumat. vini rubri. ʒ iv.

Water dressings to the arm at the line of separation.

27th.—Continues much the same as yesterday; heat of skin natural; complains of pain in fingers of the diseased arm; intellects clear; no expression of anxiety in countenance.

Haust. anody. rept.

Cont. vinum. Full diet.

28th.—Suppuration on the inner side of the arm, copious and foetid; the livid spots on the outer side of the arm have not extended; but there is some very slight redness around them; pulse about 100, of moderate strength; tongue clear; heat of skin still natural, and appetite good; bowels moved once since last report.

Cont. vinum et haust. anodyn.

A little chloride of soda to be added to the dressing.

29. Suppuration much the same as before in quantity, but more foetid. The separation

between the dead and living parts, which had taken place slightly on the inner side of the arm when she was admitted, is extending a little, both on the inner and outer side of the arm. Pulse 98, of moderate strength, skin natural, tongue clean and moist. Bowels open, appetite excellent.

Con. medicamenta.

30th.—Much the same as yesterday—sleeps a little better.

31st.—Suppuration more copious and still extremely foetid; separation between the parts progressively on the inner part of the arm, but no change in the appearance of the livid spots on the outer side. Pulse 102, still of very good strength. Bowels regular, appetite good. Tongue clean and moist.

Cont. vin. et haust.

Feb. 2nd.—The separation of parts on the inner side of the arm advanced a little; the livid spots on the outer side have disappeared, except the largest, where a small superficial slough seems to be forming. The diseased parts were removed to day, the line of separation having fairly formed, and suppuration taken place in a great part of its extent. The soft parts were divided by means of a pair of scissors, cutting as near to the living parts as could be done with safety. The bone was then divided as high up as possible, a bistoury having been previously passed round it, so as to insure the division of the soft parts, and only a slight oozing from the bone, which was found to be alive when it was divided.

Cont. vinum et haust.

Water dressing to the stump.

3rd.—Continues much the same as yesterday. Pulse 104, of good strength. Tongue clean and moist. Bowels moved once. Skin natural—appetite good.

Cont. med. et vin.

5th.—Suppuration copious; a portion of the dead parts left have separated, and a healthy, florid, granulating surface remained.

8th.—The greater part of the slough have separated; the stump presents a healthy granulating surface.

Perstat.

9th.—Stump looks well, as the posterior part of the end of the bone where it was divided is covered by healthy granulations.

March 4th.—Gradually improving since the last report. She is now so strong as to be able to walk alone in the ward—no sign of disease in any other part of the body.

The arm was examined after its removal. The arteries and veins were found perfectly healthy, the latter without any coagula in them.

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MEDICAL FEES.

To the Editor of the Original London Medical and Surgical Journal.

SIR—In the leading article of your excellent Journal of the 21st instant, I observed an able notice of the present state of the

profession in regard to Physicians' fees. This is a matter in which non-medical people are as much concerned as the profession itself. It has fallen to my lot to feel the effects of the system, and as I have conferred with other heads of families, I have found a remarkable union of sentiment on the subject.

It has occurred to me, when I could ill-afford to give a guinea, or even half a guinea, for each visit of a physician, to defer the application for his aid till it was too late; and how many commit the same fault is too generally known. But when the physician chides the sorrowing relation for the apparent neglect, he is not apt to discover the cause, in the mode of remuneration established by the conventional rule of his class. He forgets that there are thousands who, with a general ability to pay at this or that period of the year, cannot at the moment of calamity raise the means of defraying the exorbitant charge as well as all the other increased expenses, which a sickness occasions. How great they are too frequently, when the individual who is sick is perhaps the head of the family, upon whose labour they depend for subsistence, and the suspension of whose exertions creates a double want; or the mistress of the family, whose economy is as necessary for the management of the limited income, as the energies of the husband are in another direction. We must not wonder that in such a case the physician, who comes now too often as the herald of death, and whose presence therefore all are too desirous to put off, is subject to the further cause of postponement, which is found in the deduction which his fees will make in already scanty resources. It is this which makes the physician a fashionable luxury, which small people must not indulge in, until the last extremity.

I do not suppose that the physician should go without his fair and full recompence; but I think it would be much better that he should receive it in a different manner. There should be no direct connexion between his gain and his patient's calamity—no seeming interest in the perpetration of an evil, which, though it destroy not the patient, is yet deeply wounding him in his fortunes.

The physician should be remunerated by an annual or quarterly stipend, estimated according to the means of his patient and the number of his family; and his attendance should be on the footing of a friend interested to prevent illness, rather than to increase it. I do not say that his salary should be suspended if his patient became sick; on the contrary, I think it should be increased by a gift or honorarium proportioned to the difficulty or danger of the case; and if the patient should be so insensible to what was due to his skilful friend, he might, on the arrangement for the ensuing year, stipulate for a higher stipend,

estimated on the increase of business during the last.

Severe diseases would be comparatively rare—they would be taken in time. The physician would learn accurately the nature of his patient's constitution; the latter would freely state his ailments before they became confirmed maladies; and, what is of still more importance in melancholy temperaments, they would be taught to distinguish between the indispositions that arise from the changes in the atmosphere and those which result from a diseased state of the body. Men engaged in active studies, who must work, well or ill, who require to possess their faculties in the clearest state, and like horse-racers, or prize-fighters, always to be in good condition, might be assisted to that object by the judicious and timely care of their medical advisers. Again, prescribing would cease to be a grave quackish performance, in which a man holds a pulse for a few moments, looks from the face of his patient to the ceiling or on to the ground, and then to his patient's face again; and, after a few seconds' consideration, and a few unimportant questions, affects to know the whole extent of a disease that may be constitutional, and the growth of years. The intercourse which the medical man had had with the patient in health, as well as in sickness, would have taught him the general cast and expression of his countenance, his manner, his conversation, and what sort of temperament belonged to him. He would make his physiological observations on a healthy subject as well as on a sick one, and, comparing his diseased with his healthy state, be able at a glance to discover the extent of deviation from the ordinary standard of his health. He would naturally, too, know something of his patient's pursuits, and their probable effect on his general health. In short, Sir, the field of a physician's experience would be enlarged; he would not be the hated or the feared grave man in black, nor liable to imputations of indelicacy for a persevering discharge of his duty, because his patient was impatient of restraint, or eager to get rid of the drain upon his resources. The general mode of paying by a fixed payment according to means, would enable the poor man to retain the services of a physician, who would be fully recompensed by his general return from the rest of the patients. A man of science, devoted to his profession, and eager to do good, rather than to pursue a mere trade of practice, leaping from room to room, giving a moment's thought to the patient, and two to his fee, would, in the attendance of a limited number of families, derive a full means of subsistence, with an ample opportunity of prosecuting his pro-

fession, in a pains-taking inquiring spirit, and not in the harem-scarem bustle of a practice exceeding the powers of man to do justice to it. Such a man would not be a bear—but returning to the ancient courtesies for which the physician was once remarkable, without the fopperies, though of a different sort, that then, as now, made him ridiculous, would good-humouredly enter into social intercourse with his select circle of friendly patients.

I fear, Sir, I have been painting a millennium—but I am convinced that much of social and personal evil results from the present practice, and that the physician is degraded by it as much as the public is injured; and therefore I speak thus earnestly.

I am, Sir,

Your faithful Servant,

PATERFAMILIAS.

[We shall make a few remarks on the letter of our correspondent next week.]

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BOOKS.

Descriptive catalogue of the preparations in the Museum of the Royal College of Surgeons, in Ireland. By John Houston, M.D. M.R. I.H., Curator of the Museum, &c. Vol. 1. Anatomy. Dublin: Hodges and Smith.

A well arranged catalogue.

The Dublin Journal of Medical and Chemical Science, including the late discoveries in Medicine, Surgery, Chemistry, and the collateral Sciences—Vol. vi.—No. xix. March.

Proceedings at the Sixteenth Meeting of the Hunterian Society for 1834.

Encyclographie des Sciences Medicales. Repertoire General de ces Sciences au xix. Sciecle. Dictionnaire de Medecine, et Chir. Prat. Dict. de Medecine, reunis et augmentes d'un grand nombre d'articles, extrait du Dict. Hist. aides des Encyclopedies Francais, Anglais, &c.—Tom. i.—vii. London: Alexandre.

This is the cheapest Dictionary of Medicine ever published, and is compiled from the French, English, and German Cyclopædiæ, now in course of publication. It is printed at Brussels, and published on remarkably cheap terms. The London publisher is M. Alexandre.

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CORRESPONDENTS.

Communications have been received from Mr. W. Cooke—Mr. D. J. Rae, of Edinburgh—Celsus—A Reformer—A Pupil at the Hospital of Wonders—Dr. Montgomery, Capeton, Cape of Good Hope—Dr. Tuthill, Walfox—Edinensis—Hibernicus—A Liverpool Subscriber—Castigator.

All communications and books for review are to be addressed (post paid) to Dr. Ryan, 4, Great Queen-street, St. James's Park, Westminster; or to G. Henderson, 2, Old Bailey, Ludgate-hill.

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VOL. VII.

LECTURES

ON

MEDICAL JURISPRUDENCE,

DELIVERED BY PROFESSOR A. T. THOMSON,
F. L. S.,

At the University of London; Session 1834-35.

LECTURE XXI.

GENTLEMEN—Having made you aware of those diseased states of the habit which closely resemble insanity, but are not that disease, it is now proper that I should put you in possession of the knowledge of those symptoms for which you must look, in order to enable you to pronounce any person to be in a state of unsound mind. But, before doing so, I must state broadly my opinion, that medical practitioners, in setting aside the vague ideas of diseased mind, and observing closely the influences of physical causes on the mental powers, have fallen into the error of ascribing too much to the state of the body in mental disorders.

One of the first inquiries in a case of mental alienation, whatever character it may assume, is into the history of the family of the person supposed to be insane; and in particular, whether any hereditary taint exists in it. It has been seriously doubted whether insanity be hereditary: but the most correct observation and experience have verified the hereditary character of the disease: it is a poison which has unfortunately mingled with the stream of population in this country, and it is impossible to anticipate the extent to which it may flow. The difficulty of determining this point, however, is very great; the disease may remain latent through one generation, and appear in the next with augmented force; the hereditary character, however, refers rather to the tendency or predisposition to the disease, than to the malady itself; a greater susceptibility to those impressions which are likely to rouse it into action. This state, however, may exist to a great degree, and yet insanity may not appear, particularly if the regimen, the moral habits, and the pursuits of the individual be such as are unfavourable to the

excitement necessary for awakening the malady, the seeds of which, as it were, lie concealed in his constitution. When, however, the reverse of this happens, and circumstances occur to operate as exciting causes upon a habit predisposed to insanity, the eccentricities which indicate the approach of the disease, and upon which you may be sometimes called to decide, will lead you to give a more cautious diagnosis than you would otherwise hazard, if you were not aware of the hereditary taint in the family of the individual. Let us take an example—A patient feels occasional pain or sense of fulness in his head, he becomes incapable of confining his attention, neglects his accustomed employments, is sleepless, loquacious, and, contrary to his usual habits, decides positively upon every subject that is started; is impatient of contradiction, and scorns reproof: if at the same time he supposes that offences are offered to him, and injuries inflicted, and plots contrived against him, which were never thought of by any other person; if he seem confused and wandering in his manner, like a half-intoxicated man, and speak with eagerness and impatience, as if the ideas were not only too rapid for his utterance, but had crowded into his mind in a state of confusion: under such circumstances the approach of insanity may be strongly suspected. Still, in such a case you may justly hesitate in pronouncing an opinion; but this hesitation will be greatly lessened, if you are made aware that any of the branches of his family have been insane. In such a state also, we must carefully inquire into any change in the habits of the person; whether he have lately indulged more freely in the use of wine; if, from having been abstemious, he now drinks freely; if, from being reserved and modest, he talks boldly—is not backward in entering into society from which he refrained—acts obscenely—and tempers his wit and vivacity with unusual oaths; displays violent gusts of passion: upon such evidence we can have little doubt of, at least, the near approach of insanity. It is seldom, however, that a physician is required to deliver an opinion in this stage of the disease: I say the dis

ease—for the malady, although not very obvious to ordinary observers, already exists. It is true that the extravagancies of eccentricity may be so great, that it is extremely difficult to discriminate between them and insanity; and the family of the insane person is always disposed to regard the precursory symptoms of insanity rather as eccentricities, as sallies of humour, than what they really are; thence the disease is permitted to advance to its perfect and fully formed state, and health, fortune, and character, be all on the brink of ruin, before any medical opinion be required, or any proper care be taken of the madman. It is at this period, then, that you are most likely to be required to authorize confinement and restraint, or to confirm the truth of the allegation of insanity, when it becomes an object of medico-legal inquiry.

The approaches of insanity, however, are not always so progressive as the description which I have given you would lead you to presume; the patient is sometimes seized in a moment; the disease assumes at once its true character, and crimes are perpetrated, under such circumstances, which baffle both the discriminating judgment of the physician, and the decision of a court. The state which is most likely to be mistaken for this sudden accession of disease is anger, under the influence of which crimes are often perpetrated, which receive pardon, from the conviction that the plea of insanity which is set up is well founded; it therefore behoves you to be able to point out the distinction between ungovernable anger and the delirium of a sudden accession of mania. Anger is not confined to man; the instinctive feeling of self-preservation, which probably is the origin of the passion, is felt even by the insect, who returns injury for injury; and, in the human species, equally by the weak and the strong, the child and the man, the peasant and the philosopher. There is generally some real injury, or some supposed injury, before anger is roused; a state of suffering is inflicted, either bodily or mental, which awakens in the person feelings of the most lively kind, to remove it: and to effect this the passion is roused, to make the offending person feel the power of the sufferer, and to know that the vengeance is equivalent to the injury. The degree of anger which is thus roused, is regulated greatly by the temperament of the individual; in some persons the slightest causes raise great turbulence of spirits and ebullitions of blood; in others these states are not produced by the greatest injuries; in some the passion is overpowering, and terminates like the tornado; in others it continues after the agitating cause has ceased, gradually subsiding like the swelling billows, after the storm has spent its fury. Let us examine physiologically the effects of this passion on the individual, so as to be able to compare it with those of the delirium of insanity.

There are two distinct states of anger, which are known by the terms, *burning anger* and *pale rage*.

In the first the heart and arteries are excited to inordinate action, the blood is propelled with violence to the surface of the body—thence the sensation of burning heat which is experienced; the face becomes flushed, the eyes sparkle, the breathing is convulsed and irregular, and as the muscles contract, as it were with clonic action, the blood cannot return readily to the heart, and consequently the veins of the face and neck swell, grow tumid, and seem ready to burst; the teeth are firmly set, from the spasmodic contraction of the masseter muscles, and the whole physiognomy assumes that aspect which fully justifies the adage, "*Ira furor brevis est*:"—yet this state is not insanity.

In pale rage the reverse of this state occurs; a deadly, pale, and livid hue overspreads the face, the features shrink, the skin is corrugated, the eye-brows are knit, the eye has a dull rather than a fierce character, the blood is congested upon the interior, and the passion seems stifling itself; or, as Burns quaintly describes it in the person of a sullen dame—

"Gathering her brows like gathering storm,
Nursing her wrath to keep it warm."

Now, in either of these states, although the terror of public shame and punishment be thrown out of view in the excess of the passion, yet it immediately occurs after the crime which results is perpetrated; the sudden and associated thought of personal danger calms the fever; but this is not the case in the criminal who has been impelled to the deed of blood by the sudden accession of insanity; and this affords one point of comparison in forming a diagnosis, independent of those corporeal signs which I will point out, in describing the paroxysms of mania. In the angry man, the recollection of the crime produces serious and deep reflections: in the madman, when the delirium subsides, instead of being reflective, he becomes gay and social, he remains unaffected by the act, ungoverned by reasonable conclusions. A powerful man, who had been subject to epileptic attacks, when these subsided, became suddenly furious, and during the transports of his disorder, murdered two children and a woman. For this act there appeared to be no motive. He was confined in a lunatic asylum, and remained tranquil and did not discourse irrationally, and when questioned regarding the murder, replied that he knew nothing of it—that some person had informed him of his crime, but he had no more memory respecting it, than if it had been committed in his sleep.

I must not be misunderstood in using the term sudden accession of insanity. It sometimes occurs suddenly, without any obvious exciting cause; but in these instances there is generally a predisposition

to the disease—some hereditary taint: more commonly, however, before such furious paroxysms occur as to resemble a sudden ebullition of violent anger, many symptoms are obvious, which indicate the approach of the disease; but they are too frequently either overlooked, or the relations of the patient oppose themselves to those measures which, if timely adopted, would generally prevent the evils which are vainly lamented, when it is too late to avert them.

An excellent illustration of this remark is quoted by Sir Alexander Crichton, in his *Inquiry into Mental Derangement*, from the third volume of the *Psychological Magazine*. (Here the lecturer read the extract—see vol. ii. p. 59).

In this case the self-conceit, contempt for the prevailing opinions of the world, pride, and irascibility of the lunatic, were sufficient indications of approaching insanity; and it would be fortunate for the welfare of society, were the limits between real religion, and that fanaticism which leads to absolute frenzy, more distinctly and generally perceived.

Let us now suppose that the disease actually exists; and that your evidence is called for to determine the point—What are the proofs which should lead you to pronounce the presence of actual derangement? To enable you to pronounce in either way, the disease, in the first place, must be thoroughly understood. The physician ought not to come into court, should this be necessary, merely to state opinions, but be fully prepared to support those which he advances, and to give the reasons which have influenced his decision. He must also be prepared “to submit his opinion to the comprehension of the ordinary persons who are to appreciate his deposition.” In delivering his opinion, that the irregularity of the actions of the supposed lunatic can be accounted for only by admitting the deranged state of his mind, the physician must also be prepared to prove that the state of insanity is sufficient to account for these; and that, in a sound mind, the impulses by which he is goaded for the accomplishment of his purposes, although they cannot be traced and explained, yet would not have operated in the same degree. To perform this duty in a satisfactory manner, the medical man must look at the prominent and most characteristic features of the disease, both as these increase his own acquaintance with it, and enable him more easily to convince others that he possesses such an intimate knowledge as alone can give weight and importance to his opinions regarding it. You must also always bear in recollection, that in the eye of the law, two witnesses deposing *sanæ menti*, are preferred and believed before a hundred, touching fury and madness: thence the necessity of being able to put forward the most prominent points which establish the fact of

the existence of the disease. What are these points?

In the first place, the practitioner must distinguish the variety of forms in which the disease shows itself, whether as *Mania*, *Melancholia*, *Dementia*, or *Idiotism*: the first only, strictly speaking, are madness; the third is mental alienation from functional disease of the brain; and, in common with the two former, deprives the unfortunate object of it of the control of his person and property: the fourth, although usually classed with insanity, is evidently a distinct species—not a derangement of mind, but the deficiency of intellectual power, congenital, not acquired. The legal division is somewhat different, as the following quotation from Littleton will explain.—“*Non compos mentis*,” says Littleton, “is of four sorts: 1. *Ideota*, which from his nativité, by a perpetual infirmity, is *non compos mentis*: 2. Hee that by sickness, griefe, or other accident, wholly loseth his memory and understanding: 3. A lunatique that hath sometime his understanding and sometime not, *aliquando gaudet lucidis intervallis*; and therefore he is called *non compos mentis*, so long as he hath not understanding. Lastly, Hee that by his own vitious acts for a time depriveth himself of his memory and understanding, as he that is drunken.”

Mania, considered in a medico-legal point of view, “annuls a man’s dominion over property; dissolves his contracts and other acts, which in his sane state would be binding; and takes away his responsibility for crimes:” in a medical point of view, it may be described as “a state of mental alienation, accompanied by turbulence and unusual ferocity in language and deportment, and by a comparative insensibility to ordinary stimulants.” From this description it is evident that the most striking features by which actual mania is to be recognized, are displayed in the physiognomy of the affected person, the condition of his nervous system, and the perverted state of his ideas. The physiognomy of mania consists chiefly in a peculiar cast of countenance, which is familiar to those conversant with the malady, but not easily described; it is something which seems to involve gloom, suspicion, and ferocity. There is a wildness in the eye, which is protruded and glistening: it has a wandering motion in every direction, in a manner peculiarly disagreeable to a beholder. Sometimes, however, it is sunken and dull, fixed upon some object for hours together, or bent on vacuity; or, it seems to follow some phantom which is evidently present to it. During a paroxysm of high delirium, the eyes appear as if firmly pushed forward, and the iris is contracted. With this state of the pupil, we often find a condition of the scalp, which although it be not strictly physiognomical may be mentioned here. It is “a relaxation of the integuments of the cranium,

by which," says Dr. Haslam, who first noticed it, "they may be wrinkled, or rather gathered up by the hand to a considerable degree." The gait of the maniac is quick and hurried, yet, frequently, he stops suddenly and turns round, but not as if to regard any thing, but more in the manner of an absent man. The prevailing complexion of maniacs is swarthy; and, when not naturally so, it soon acquires this hue. Out of 265 maniacs who were examined, "250," says Dr. Haslam, "were of a swarthy complexion, with dark or black hair: the remaining sixty were of a fair skin, and light, brown, or red haired. Along with these physiognomical characters, although the look is often fierce, and they are boisterous, yet they are frequently almost instantly subdued by the fixed gaze of a decided person; for pusillanimity is a remarkable trait in the character of the insane." During the paroxysm, the action of the body is violent and vigorous, with great exertion of muscular strength; they remain awake for many days and nights together, talking incessantly, sometimes in the most boisterous manner; then suddenly lowering the tone, speak softly, and in a whisper, varying the subjects, and passing in the most incoherent manner from one subject to another, totally unconnected with it. This watchfulness, nevertheless, does not produce a dull and sunken state of the eye, as in cases of sanity, worn out by watching: but it remains sparkling and protruded. There is, finally, a systematic dignity in mania, which never can be imitated by the most expert mimic, and is peculiar to this disease.

The second description of the obvious characteristics of mania depends on a change produced on the nervous system. Owing to this, there is frequently a great indifference to food, and the want of it can be sustained, for a very long time, without any apparent inconvenience. At other times the appetite is voracious, and every thing is swallowed which comes within the reach of the lunatic. From the same state of the nervous system, maniacs are able to endure greater degrees of heat and cold, and more sudden alterations of temperature, with impunity, than sane people; this does not, however, secure them from the usual effects of severe cold; indeed, they are very liable to mortification of the toes in winter; but, at the same time, they suffer less pain than sane persons in the same state. There is, also, a general insensibility to external impressions; probably, in part, attributable to the great mental excitement absorbing, as it were, the whole of the attention; and it is not unlikely that the deficiency of memory, which is so remarkable in maniacs, arises from the same cause. This is indeed one of the most striking features of the disease, and is beautifully alluded to by our immortal dramatist, whose keen observation no state of human nature, whether

diseased or healthy, escaped. Hamlet, in his interview with his mother, is accused of madness, when he desires her to look at the ghost, visible only to him: the Queen says,

"This is the very coinage of your brain :
This bodiless creation, ecstasy
Is very cunning in,
Ham. ———— What ecstasy ?
My pulse, as yours, doth temperately keep time,
And makes as healthful music. 'Tis not madness
That I have uttered: bring me to the test,
And I the matter will re-word; which madness
Would gambol from."

Besides this altered state of sensibility, here is an evident perversion of sensation.

This accounts for the *tinnitus aurium*, and the delusions connected with the organ of hearing, which are such constant accompaniments of mania. The conversations which the celebrated Tasso held with his familiar spirit, can be accounted for on this perverted state of the faculty of hearing; and nothing is more common in most of the cases of mania.

(For Tasso's case, see Crichton on Madness, vol. ii. p. 40).

It is this state of the ear which often leads to suicide; the unfortunate victim of it imagining that he hears the devil tempting him to self-destruction. One of the most curious cases of this perversion of hearing is related by Dr. Haslam, in his observations on madness.

It is scarcely necessary to say that the eye is also affected; and the hallucinations are usually connected with objects of sight.

(The lecturer here related Colonel Watson's case).

Smelling and touch are equally depraved in mania: of which many curious instances might be adduced were it necessary.

But mania does not always present such features; the permanent delirium is sometimes confined to one object; thence, the disease is termed *monomania*. In this state, when the delirium returns at intervals, instead of running on in the same strain day and night, it is very difficult to detect the disease, unless we be made fully aware of the period when the paroxysm recurs. Individuals thus affected often appear reasonable, when conversing on subjects beyond the sphere of their delirium; and it is in vain to endeavour to perceive their insanity, unless we accidentally, or intentionally, if we are aware of it, touch upon the chord of the mind which is unstrung. In many instances, however, this species of the disease is connected with the same irregular, often desponding state of mind, which exists in moral insanity. Several instances

might be brought forward; I will only notice one described by Dr. Prichard. (The lecturer read the case from Dr. Prichard's work). One of the most interesting instances of this state was related to me by a learned and eloquent friend, who is now one of the Scotch judges. (*The lecturer here related the case of a young lady, whose lover died on the evening she was to have been married*). In this state of the disease, there is apparently less danger to others than in the *mania furibunda*; but this is only apparent: during the paroxysm they often become dangerous both to others and to themselves; and sometimes they are so conscious of this, that they warn those about them, or intreat them to prevent their doing injury.

They are also conscious of the approach of the paroxysm, by a sensation of burning heat, with pulsation within the skull; the pulse is generally full, hard, and strong; the temperature of the skin greater than natural; the bowels are costive, and tormina is often an accompaniment of this state. Patients labouring under monomania are more voracious than those in *mania furibunda*; but sometimes they endure hunger with great pertinacity. According to the doctrines of phrenology, "Mania is not a specific disease, but merely an indication that the disease, whatever it may be, implicates the whole brain and all the faculties of the mind; whilst, in monomania, the morbid affection is strictly limited to one or two of the cerebral organs, and we are informed that the reason why it is so difficult to establish its existence in a court, arises from the patient having often a great degree of control over his manifestations." I cannot venture to offer you any critical opinion upon these remarks, as I really confess that I do not understand them. I will describe to you the state in which the brain has been found, in post mortem examinations, when the disease has proved fatal, after I have taken a brief view of the remaining species of mental alienation.

Melancholia, the next species of insanity, is that form of the disease which is attended with some seemingly groundless, but anxious fear, which plunges the person into a gloomy and desponding state, and frequently leads to the commission of suicide or murder. It is a more common form of insanity than simple mania, and generally arises from mental causes, such as extreme study, religious fervour, love, grief, sorrow, and such like, operating on a habit hereditarily predisposed to the disease.

The corporeal influence of the depressing passions is a torpor in every irritable part, especially in the circulating and absorbing systems; thence the countenance becomes pale and shrunk, and the extremities cold; the pulse is small, and there is a sense of general languor over the whole frame. The pulmonary vessels, from the torpidity of the sanguiferous system, suffer congestion, and

from this cause arises the sensation of fullness or bursting at the heart, which deep grief or sorrow induces. The respiration is slow, laborious, and interrupted with sighs and sobbing, which may depend on the nature of the manner in which the air is allowed, as it were, to escape from the lungs, and the necessity of a deep inspiration to supply the waste, and to relieve the congestion which had taken place on the right side of the heart. In this case, grief seems to act as a directly sedative power, exhausting the vitality of the system, without any previous increase of vascular action. Now, when grief and sorrow are not so great as to produce this sudden depression, but continue a more moderate influence for a great length of time, so much disorder, both of body and mind ensues, as to originate, in a *predisposed* habit, that species of insanity which we have now before us—*melancholia*. When this takes place, the disease may be read in the looks of the patient, though the physician must not trust to this alone. The face grows thin and emaciated, and the muscles weak and relaxed; the adipose support of the eye-balls is greatly diminished, and the eye retires into its socket; the eye-brows are drawn together, and the whole countenance is pale and dejected. The stomach and digestive organs are greatly disordered; pain is felt almost as acute as if gastritis or inflammation of the stomach were present, and is attended with vomiting after every meal; but this may be readily distinguished from gastritis by the pulse, the state of the skin, and the general expression of the countenance; the pulse is seldom quick, the skin generally cold, and the countenance more expressive of dejection and sorrow than pain, and the mind oppressed: it is not wonderful that (the wretchedness of life being the only picture present to the mind) the termination of *melancholia* should be suicide. In such a state, the power of comparing our ideas is lost; yet the self-murderer appears to reason, and to convince himself of the necessity of the crime which he contemplates. He however looks at two points only—the wretchedness of life, the dreary, unpromising, hopeless track which he sees before him, and that relief from suffering which the grave alone is capable of affording; thence his purpose is taken; he forgets every obligation he owes to society, every duty to his Creator, and at once plunges into suicide, to rid himself of the misery of his existence. This state of mind, and the reasoning to which it leads, are most beautifully described by two of the most observing of our native poets, Spencer and Byron.

"What if some little payne the passage have
That makes frayle flesh to fear the bitter
wave?

Is not short payne well borne that brings
long ease

And lays the soul to sleep in quiet grave?

Sleep after toyle, porte after stormy seas,
Ease after warre, death after, doth greatly
please." SPENCER.

"I would not if I could be blest:
I seek no paradise but rest."

BYRON.

Having pointed out the manner in which grief, when long continued, disorders the corporeal functions, and, by constantly preserving one chain of thought, deranges the judgment, and produces melancholia, let us observe the temperament in which these symptoms usually occur, that our diagnosis may still be rendered more easy. The predisposed to this species of insanity are commonly of a dry and lean frame of body, with small and rigid muscles, not filled up in the interstices with fat: a sallow skin, or a complexion of a brownish yellow hue, with little or no red in the cheek: stiff black hair, hollow eyes, and large veins, particularly in the hands and arms, and a constant expression of dejection. As the disease advances these signs increase; the patients become subject to impressions of fear and despondency, and the stomach and digestive organs become depraved: occasionally there is much flatulence, and almost always the bowels are torpid. When the disease is fully formed, the pupils of the eye are often dilated, and the organ itself has a dull, muddy look, and seems to roll heavily on surrounding objects, or it gazes with a fixed unmeaning stare on vacancy. The aduata is often as if painted a dull purplish red; a strong light has a transient effect only on the pupil. The pulse is extremely vacillating, slow and feeble, and sometimes labours. The extremities are always cold: and it is probably owing to this state that the urine is abundant, pale, thin, and cloudless; sleep is rarely procur'd, and when it is present, is broken by visions and frightful dreams.

The general mental characters which we have to look for, to detect melancholia, are anxiety and despondency: a desire to do right, but a feeling which seems to arrest every effort at duty: a strong desire for relief, but despair of obtaining it, and consequent *tædium vitæ*. If suicide be not committed, the same object is attempted by murdering some person; and the victim selected is generally a child or person for whom the melancholic lunatic has a sincere love: and this desire either to commit suicide or murder is one of the most marked distinctions between melancholia, in which it exists, and hypochondriasis, in which it is absent. On this account, no species of insanity requires more close and attentive watching than melancholia, and none so frequently will be brought before you in a legal point of view. It particularly behoves you to caution relatives as to the danger of leaving such patients alone, especially when religious enthusiasm has had some share, as an exciting cause, in the development of the disease.

Religious enthusiasm, as giving birth to deep melancholy, is a common cause of suicide among certain sects in this country. The patient believes that he is deserted by the Almighty, and cannot be forgiven; the continued recurrence of this idea at length brings on a diseased state of the brain; this is followed by despair; and it is the desire of relief which drives the unfortunate individual to commit the crime of self-destruction. In some instances, although few, he believes that he is destined for eternal happiness; he cannot endure the delay which life presents to its accomplishment, and yields to the urgency of the internal impulse. In both cases the patients require to be watched.

But nothing is more common in such cases, than for the advice of the physician to be superseded by some meddling, injudicious friend; and suicide is a general termination of melancholia. (Here the lecturer related a case).

Among the variety of forms in which melancholia displays itself, one particularly demands your attention. That variety which Sauvages terms melancholia attonita is of this kind. The patient preserves an immovable posture, which he never alters unless forced: "if he be seated, he never rises up; if standing, he does not sit down; if lying, he never gets up. Neither does he move his feet except they be pushed aside by a bystander: he does not shun the presence of men: if asked a question he does not answer, and yet he appears to understand what is said: he pays no attention to objects of sight or touch, but seems immersed in profound thought: if food be put into his mouth he will eat; and if liquids be presented he will drink. There is generally present some idea of being cast off or condemned by the Deity."

Another curious form of it sometimes occurs, in which the hallucinations assume that form which in the age of superstition passed for inspirations from the Deity; and which among the multitude are occasionally regarded as such. This is well illustrated in the life of Saint Teresa, as detailed in Butler's *Lives of the Saints*. (See Crichton, vol. 2. p. 451, Appendix).

If we suppose a case of melancholia ending in suicide, and a coroner's inquest assembled, if doubt arises from an imperfect history of the case, it is necessary to inquire what evidence can be procured from the post mortem examination. In general the brain of melancholic maniacs is softer than that of sane individuals; sometimes yellow, gelatinous, or bloody fluid, is found at the base, or contained in cysts formed in the anterior lobes; occasionally the brain emits a peculiar foetid odour; but this often occurs also in the brains of epileptics and idiots. The softness serves to strengthen our diagnosis between mania and melancholia; as in mania, although it is softer than natural,

yet it is less pulpy, particularly in the cineritious part, than in melancholia. Sometimes, when the consistence is natural, the medullary portion is full of bloody points, from the great turgescence of the vessels. In general, the ventricles are enlarged, sometimes to a very uncommon degree, but, on the contrary, these cavities are sometimes much smaller and narrower than usual; this, however, is less common than the opposite state. In many instances fluid is found in the ventricles, but not in all. In mania the choroid plexus is swollen, occasionally containing hydatids, occasionally with ossified spots; in melancholia hydatids are more common. The cerebellum is generally softened to the same degree as the cerebrum; the pituitary is enlarged, and most commonly harder than natural.

When such appearances are observed on post mortem examinations, coupled with the previous history of the case, there is much confirmation of the opinion that the person has laboured under melancholia; and evidence of this becomes peculiarly necessary in proving the validity of wills, as my learned colleague will fully explain to you. With respect to the appearances presented in post mortem dissections in mania, which may be now noticed, it has been ascertained,

1. That no distinction generally exists with regard to the size of the head, between sane and insane individuals; nor is there any peculiarity of form.

2. The skull, in maniacal patients, is commonly very thick; but this has not been observed in melancholics.

3. The *dura mater* adheres strongly to the skull; and yet, in parts, fluid is found between them; this membrane has been found also much thickened, varying in colour, and occasionally ossified.

4. The *pia mater* has been found thickened and studded with small globular, spongy

bodies, and in a few instances ossified. The spongy bodies are situated chiefly under the crown and forehead, sometimes as large as a pea. The ossifications are commonly met with on the anterior surface of the anterior lobe of the brain, on the upper surface of each hemisphere, and on the flat surface lying on the falx. Sometimes coagula of blood are found in the pia mater; but these often occur from violence during the paroxysm.

5. In the *substance* of the brain indications of inflammation are common; sometimes hydatids are found, and occasionally an insupportable fœtor is exhaled on cutting into the brain. Bonetus mentions some cases in which the brain was dry and friable: but this is a rare occurrence. On the contrary, the brain is more frequently soft and pulpy, even to an extraordinary degree.

6. In many instances water is found in the *ventricles*. This has been the case in all the brains of madmen which I have examined: and, in these instances also, the choroid plexus was generally diseased, and often studded with hydatids, particularly when the disease had been accompanied with epilepsy.

7. The *pineal gland* is sometimes found covered with serum; sometimes it is much larger, harder, and more tenacious than natural. Sometimes stony concretions are found in it, but not always.

8. The *pituitary gland* is, in general, harder than natural.

9. In the *cerebellum* the same spongy bodies and ossifications as have been noticed in the brain are also present: the membranes are also thickened and studded with hydatids; and sometimes coagula of blood have been found on the medulla oblongata and spinalis; and the consistence has corresponded with that of the brain.

LECTURES

ON THE

INSTITUTIONS OF MEDICINE,

DELIVERED BY JOHN FLETCHER, M.D., F.R.C.S.E., AT THE ARGYLE SQUARE SCHOOL OF MEDICINE, EDINBURGH; SESSION 1834-35.

LECTURE XIV.

Arguments in Disproof of the Vital Principle of Authors.

FIRST, then, with respect to the *existence* of a vital principle, or of life as a substance. The evidences commonly adduced in favour of this hypothesis hinge principally upon the presumed impossibility of explaining either the original organization of a living being, or its characteristic actions when organized, without this admission, and the incompatibility of the opposite opinion with a belief in a future state of existence (a): on the degree

(a) That life is an *Ousia*, an entity or a substance, material or immaterial, resident in

certain aggregations of matter, and the cause both of its organization and of the character-

of validity therefore of each of these alleged evidences, it will now be necessary to say few words.

I. If, then, Organism—it is confidently asked by most of the supporters of the vital

istic actions which it afterwards performs, is the oldest opinion on the subject, having been entertained by almost all the ancient sects of philosophers. The notion of the existence of an Elementary Fire—the soul of the world, the formative and conservative power of all nature—descended from the Brahmins of India, through the renowned Hermes Trismegistus, or Tot, of glorious memory, and the Pastophoric of ancient Egypt, to Thales and Pythagoras, the former of whom studied at Memphis, and subsequently taught philosophy at Miletus, while the latter studied at Thebes, and taught afterwards at Crotona; and it thus became the tenet of the numerous schools which in later times flourished in Greece and Italy, the Academic under Plato, the Peripatetic under Aristotle, the Stoic under Chrysippus, and so forth. By the “learned Theban,” indeed this *Πῦρ καθαρσιον* of the Egyptians had its name changed to *Φύσις*, while by Plato it was called for the first time *ψυχή*, by Aristotle *ἐντελεχεια*, and by Chrysippus *πνεῦμα*, nor were the opinions of these and other celebrated philosophers respecting the nature of this imaginary substance less discordant than the names which they imposed upon it; some looking upon it, like the original propagators of the doctrine, as a kind of fire, others as a kind of air, or ether, or spirit—the breath of life, &c.—and others again as merely a kind of water (Ciceronis Tusc. Quæst. lib. i, § 9, 10). But whatever were its nature, this supposed substance, actuating, as was believed, the microcosm or universe of which it regulated all the motions in the capacity, as it were, of life or soul of the world, was capable of being split or divided into innumerable portions, so that each individual microcosm, or organized being, got a chip of it—a *Derivæ particula aura*—and this in quality of its proper life, in like manner actuated and directed all its proceedings. This idea of the vital principle, in its character of fire, has been immortalised by the story of Prometheus, who is said by the poets to have vivified his clay statues by a fragment of it stolen from the chariot of the sun; and a similar notion was embraced by all the earlier physicians. Thus, by Hippocrates, the human body is described as consisting, not merely of *ισχυρτα* and *ισχυμενα*, of which notice has been taken already, but of *ενορμουνητα* also, which seem to signify nearly the same thing, or the same no-thing, as any one of the terms above specified—so much so that Galen subsequently again employed, instead of it, the term *πνευματα*, from Chrysippus; and having split these *πνευματα*,

as lately mentioned, into three families, under the names respectively of Vital, Natural, and Animal Spirits, to each of which he gave as well as a “name,” a “local habitation,” the first being placed in the heart, the second in the liver, and the last in the brain, conferred a most essential favour on the subsequent physiologists of the vital principle school, by supplying them with a most convenient *Θεὸν ἀπὸ μηχανῆς*, to be always conjured up when any difficulty was to be explained, or at least disposed of. In this way, then, life came to be regarded as a substantial existence, like that coarser kind of fire which was one of the four reputed elements of all things; and as the latter, when it entered into bodies, was represented as the cause, as well of their general physical properties, as of the peculiar phenomena which they displayed during combustion, so the former, on becoming a denizen thereof, was described as the cause, first of their organization, and afterwards of the peculiar actions by which they were distinguished. And this view of the matter was perhaps the most natural to man in the infancy of philosophy, impressed as he was, from the first, with the idea that all matter—at least all the grosser forms of it—were essentially inert, and of course disposed therefore to ascribe all spontaneous motion to a union with the thing moved of some substantial moving cause. It was not easy even for the most exalted geniuses, with so limited a knowledge as they then possessed of the essentially different properties resulting from differences in the composition, substance, and aggregation of different forms of matter, to do otherwise than attribute the distinctive actions of organized beings to some hidden principle operating within them, of which inorganic matters were destitute; but it might have been expected that such vague surmises as this would long before this time have sunk under a more enlightened philosophy, and that life as a substance would long since have shared the same fate as fire as an element. Such however has not been the case, the notion that life and living action are quite distinct, the former being the substantial cause of the latter, having descended from the authors above enumerated, first through Van Helmont, who, as he could not of course use any word which had been employed by Galen, chose to substitute the term *Archæus*, borrowed from Paracelsus, for the *πνεῦμα* of his more orthodox predecessors; Harvey, who returned to the term *ψυχή*, or *anima*, which, as before observed, was represented as [of two kinds, vegetativa and sensitiva; Borelli, Stahl,

principle doctrine—be the cause, either *per se* or in conjunction with any other condition of life, what is the cause of organization, or that process from which organism resulted? Can any known chemical or mechanical forces give rise to so specific a composition, so

who continued the title and still further extended the powers of the said anima; Carl, Corchwitz, Swammerdam, Whytt, Sauvages, and Barthez, the first to familiarize physiologists to the term vital principle; to Fryer, John Hunter, the first to attempt to identify this supposed principle with electricity; Plenck, Platner, Hufeland, Sprengel, Brandis, Schmidt, and other writers of the close of the last century, from whom it has been transmitted unadulterated, by Abernethy, Pring, Barclay, Copland, Good, Davies, and others, down to our own times; and we are still condemned to hear the terms vital spark, vital spirit, vital principle, and so forth continually used, not only by the vulgar, but by philosophers of eminence, as referring to something which has confessedly a real and substantial existence; and the human body is still sometimes described as consisting of solids, fluids, and a vital principle, almost in the same words as had been employed between two and three thousand years ago by Hippocrates. With respect to the modifications of this notion entertained by those who have most recently written on the subject—and it seems quite superfluous to go further back than the present century—Mr. Abernethy, who treads everywhere so closely in the footsteps of John Hunter, believes of course that life is if not identical with, certainly analogous to electricity or galvanism—(On Mr. Hunter's Theory of Life, 1814); but the refutation of this unfortunate hypothesis may be advantageously deferred till the subject of electricity or galvanism, as a stimulus to irritability, falls to be considered: in the mean time it is sufficient to say of it, that any thing more vague and visionary has never hitherto obstructed the progress of physiological science. By Dr. Pring, on the contrary, the vital principle is represented as a substance quite *sui generis*, and he speaks of a "sum and quantum of life," with as much confidence as if it could be meted out by the help of a pair of scales, or a glass measure; while it is an inference from his hypothesis, that, as life is on the one hand, a cause of organization, so organism is, on the other, a cause of life, since the substance of life is continually renewed, he assures us, "by the assimilation of its identity from the blood." (On the Laws of Organic Life, 1819). But, if the substance of life be renewed from the blood, it must either have entered the blood in propria persona, with the air or food, in which case the said air or food ought to be alive, or it must have been formed by the blood, in the manner of a secretion; and from what ingredient of the blood secretion can pro-

duce *de novo* a simple substance, material or immaterial, remains to be explained. But perhaps the substance of life is not simple—and, indeed, we are told that "the influence of life is to separate from the blood those *elements* which constitute its own identity; and elsewhere, that "animal heat is a part of the principle of life." *Elements* and *parts* of a *principle*—*material ingredients* of that which even those who look upon it as substantial still generally consider as *immaterial*! But it is mere waste of time discussing such "verba et voces prætereaque nihil" as these. Dr. Barclay's work (On Life and Organization, 1822) extolled, as it has of course been, by those who advocate similar opinions, consists, not so much of a statement of arguments in favour of the existence of life as a substance, as of a parade of authorities on the question whether life be the result of organism, or organization—whence organism springs—be the result of life a question only indirectly connected with the one at issue; since, although most of those who contend for the existence of life as an entity, adopt the latter opinion, there are of them, as above observed, who still imagine, like all those who deny this existence, that organization is independent thereof, and believe that life does not enter the being till its organization has been effected. Dr. Barclay is not of these; but presuming on the existence, from the first, of a principle, which may be called indiscriminately vital, sensitive, rational, or immortal—a most unfortunate, but very unusual jumble—indulges in a tirade of somewhat captious abuse of the head and heart of every body—in particular of Blumenbach, Cuvier, Cabanis, and Lawrence—who presume to differ from him, and whose tenets he vaguely conceives likely to interfere with "the raptures of Moses and the Lamb." (p. 399). Dr. Barclay was an excellent anatomist and an excellent man; but, as good anatomists and as good men as he, have entertained, and still entertain, very different sentiments on these matters. Dr. Copland, unlike some certain of the fraternity above alluded to, derives his principal argument in favour of the existence of a vital principle from the presumption that it is essential to organization; but to this an answer is attempted above. (App. to Richerand's Physiology, 1824). In the same track follows Dr. Mason Good—a name hardly less notorious in physiology, than eminent in literature—who, in ridicule of the doctrine that life has no real existence, which had become by this time rather inconveniently prevalent, facetiously remarks, "the human frame is hence a barrel-organ,

complicated a substance, so heterogeneous an aggregation, or so determinate a body, as those which characterize an organized being? It has been conceived, indeed, even by some of the supporters, on other grounds, of the doctrine in question, that such may be the case, and that the substantial life may not perhaps enter such a being till it has become organized by other means (*a*); but it may be safely conceded to the most unmitigated substantialist that no such chemical or mechanical powers are competent to produce such an effect. It has been already shewn at some length that the chemical composition of organized tissues is quite distinct from that of merely chemical compounds, and consequently that the first step towards organism requires powers different from those by which inorganic matters are formed. It requires life, but not a living principle. It requires the life, or living action (*Zoē*) of the thing *organizing*; not any living principle (*ψυχή*) in the thing *to be organized*. It has been expressly stated lately, that organized beings can be formed only by such as are already organized, the existence of any one implying always the pre-existence of some other; and that the forming and separating from themselves, each in its generation, such new

possessing a systematic arrangement of parts, played upon by peculiar powers, and executing particular pieces or purposes, and life is the music produced by the general assemblage or result of the harmonious action." (Study of Medicine, 1825, vol. iv, p. 44). He could not possibly have illustrated the nature of life, consisting, as it does, in the proper actions of *organized* beings, better—"We thank thee, Jew, for teaching us that word." Dr. Pring instructs us only how the substance of life is continually renewed, but Mr. Davies, in some otherwise excellent papers, in a medical journal, teaches us how it is subsequently disposed of, assuring us that "it combines with the structure by means of affinity, as well as forms that structure by the same power," (London Medical Repository, 1827), a circumstance which it must be extremely gratifying to every body to be aware of, particularly as it is so satisfactorily demonstrated. Dr. Alison, in his recent work, avoids, perhaps judiciously, entering into any discussion respecting the nature of life; a word which "does not," he inadvertently observes, "denote a simple idea, and, therefore, cannot be defined," (Outlines of Physiology, p. 1), a diametrically opposite reason being offered, with more propriety, a little further on (p. 151), for not attempting a definition of sensation or thought. He is obviously inclined, however, to regard life, not indeed as any thing material, but still as an entity, since he describes organization as one of its effects; and accordingly we find his reviewer stating, in opposition to the more modern opinions concerning the nature of life, that "it is a sad confusion of all etiological relations, which ascribes to the passive and naked effect, the very existence of the agent to which this effect owes its being." (Medico. Chir. Review, 1831). Still more recently, also, Mr. Thomas, in allusion to the same doctrines, has observed, "We have first the effect, and secondly the sum total of the effect entering into an unnatural conspiracy to produce, by an *ex post facto* operation, a cause for an antecedent operation." (Liverpool Med. Gazette, 1833). Now, this is precisely what we *have* in the entity view, and what we *have not* in the

non-entity view of the matter in question; for in the former we have, first, life (*ψυχή*) represented as forming the structure, and then the structure represented as forming life (*ψυχή*), whereas, in the latter, life is admitted as an effect alone—as a *Zoē*; and it is only, therefore, upon the unjustifiable petitiō principii that life exists as a *ψυχή*—the *q. e. d.*—the very point at issue—that these objections are founded. There needs no ghost come from the dead to tell us that an effect cannot be the cause by which that effect was produced; but, had the opponents of the latter view of the matter understood the doctrine which they impugn, they would have known that life is regarded by its advocates, not as a cause of vital action, but as identical with it, the cause being the co-operation of a certain property and certain powers, both quite distinct from life in either sense of the word. That there is any evidence whatever of the existence of any substantial cause of this action—of the existence of life as an entity—those who maintain the opposite opinion are satisfied with denying, the *onus probandi*, resting of course with those who assert, not with those who deny the proposition. It might otherwise be shewn that the admission of this hypothesis brings with it many more difficulties than it removes; and that innumerable phenomena, which are easily explained without it, become quite inexplicable if it be admitted—but it is idle making giants merely for the purpose of killing them.

(*a*) This appears to have been the opinion of not a few of the authors lately enumerated as advocates of the vital principle doctrine, and the list might have been swelled with the names of Descartes, Needham, Darwin, Priestley, Fray, and many more, who, while they in general ascribe the proper actions of an organized being, when formed, to the presence of such a principle, still consider its formation to depend upon certain chemical affinities, formative appetencies, and so forth, quite independently of its operation. The general question, however, at present is—not whether life, considered as a substance, perform all that has been attributed to it—but, whether it be a substance at all.

beings is one of the characteristic actions—that is to say a part of the life of plants and animals in general. The organization then of the embryo, or the process by which a new being possessed of organs, however rude, and, in virtue of its organism, indued with irritability or vitality, is formed, is the work of the parent. Nor does there appear to be any greater difficulty, as lately observed, in conceiving this particular application of the process of secretion, than in understanding that by which every organized being, not only continually renews, in proportion as they are removed by absorption or other means, its own natural organized tissues, and sometimes whole organs, but also frequently deposits new ones, each of which is equally indued with irritability or vitality as those germs which are the rudiments of beings of a future generation: nay, the difficulty is in fact less in the case of such germs, than in that of which are called false growths, in general; since, in the former case, we have to comprehend only the organization, or the formation by secretion of the rudimental structure in question, whereas, in the latter, we have to comprehend further the mode by which, at first distinct, as already described, from the parent animal, it subsequently becomes a part of it. The germ then so formed by a vital action of the parent, and possessed, in virtue of its primordial organism, of the property of irritability or vitality, maintains from the first, by the co-operation of this property and the natural stimuli by which it is excited, a series of actions constituting its life; and it is by one modification of these actions, as effected by a supposed specific force, which has been signalized by the name of plastic power, and so many others elsewhere specified, and not by any substantial vital principle that its full elaboration is effected. It is by this that in animals are formed, by means of the parenchyma laid down from a very early period in the apparently homogeneous germinal membrane, first the three principal layers of the latter, and subsequently all the tissues and organs of the body in a certain definite series; so that, though the organization of the embryo was the work of its parent, its organogeny is its own, and parts which it received from the former in a state of diffusion and ambiguity, itself renders concentrated and determinate. But if the embryo be thus organized by its parent, how, it may be asked, was the first parent organized? With this problem the physiologist, in the strict sense of the word, has nothing whatever to do. The Almighty Creator—the first and the last—willed that, not only the inorganic, but the organized kingdoms of Nature should exist; but how either the one or the other was originally called into being He alone knows, who said “Let there be light—and there WAS LIGHT”—

*“ Whose word leaps forth at once to its effect—
Who calls for things that are not—and THEY COME.”*

It may be observed, however, that the solution of the problem, how the first organized being of every species was formed, founded on the presumption that certain aggregations of matter, however effected, became indued, in virtue of this aggregation, with a distinct property, giving rise, under fit circumstances, to the phenomena of life, is at least as simple and satisfactory as that which assumes that it was by life, as a distinct substance, entering into matter, that these aggregations of it were effected; and that the latter implies a greater infringement of the law *οὐδὲν ἐξ οὐδενος* than the former, is sufficiently obvious.

But a monad, it is alleged, that is a globule of organic matter or presumed organic molecule, which cannot have even so rude a distinction of parts as is essential to organism, may still display some of the phenomena characteristic of living beings; and in fact such, it is said, are displayed in the union of these globules—as in the process of constituting the mould and animalcules of infusions of organic matters—to form those very parts, the pre-existence of which is, on the other hand, considered necessary to give rise to irritability or vitality. This objection however to the doctrine which deduces vitality from organism has been incidentally replied to already, by the refusal to admit that these globules are organic molecules, or that it is from a union of them that the mould and animalcules which are developed during the decomposition of organic matters result. Their origin is in all probability, like that of all other plants and animals, from perfectly organized germs (a); nor does their extreme minuteness furnish any fair objection to this presumption—nay, for any thing we know to the contrary, myriads of similar germs may harbour in one such globule of extractive or sodo-albumen as certain authors have been pleased to look upon as a monad. What must have been the size of the germ which is to become an individual of the last generation of man, if, as supposed by some physiologists of the highest eminence (b), it existed ready-made in the ovary of the first mother?—nay, what must have been that of the germ which is to become a parasite destined to infest this individual, if this also, as has been likewise conjectured, existed within the former from the creation? But, reconcileable as all this is with the first principles of physical science, by which we are taught to regard matter as infinitely divisible, imagination turns dizzy at speculations like these. The common-sense view of the matter appears

(a) Ehrenberg, Arch. Gén., 1834.

(b) Haller, Bonnet, Spallanzani, &c.

to be that every organized being is secreted, in a rudimental state, by a pre-existing organized being—whether of the same, or of a different species, as in the case of parasites—that it possesses from the first, not indeed the rudiments of each individual organ as it is in future to appear—a doctrine which is quite incompatible with the frequent metamorphoses which most of these organs are now known to undergo during their progressive development—but a rudely organized structure, in virtue of which it is indued with a property which enables it, when acted on by appropriate powers, first to form in every part of the apparently simple germinal membrane, its own parenchyma, by the agency of which all its distinct tissues and organs are afterwards gradually and simultaneously deposited; and, having thus attained its mature structure, to display all the other phenomena of life, including that of in its turn secreting other organized structures, which, when again acted on in a similar way, again go through a similar process.

II.—It is however chiefly the singular and apparently anomalous nature of the characteristic actions of organized beings, when mature, which, as it first introduced, so it still serves to perpetuate the vague notion of some distinct substantial principle as their cause. A corpse which has just ceased to live—that is to say, to display any of those peculiar phenomena in which life consists—respiration, circulation, nutrition, secretion, absorption, and so forth—cannot, without an effect, be conceived to have undergone so great a change, without having lost something substantial which it previously possessed, and which was the cause of its living. But if we reflect on these actions, anomalous as they appear, what do we find them in fact amount to but certain movements of either particles or masses of matter, not certainly identical with, but still very analogous to those which, in inorganic matters, we call chemical and mechanical, and which we are contented to ascribe, not to any substantial principle of action, but to certain properties and powers resident in these matters, the reciprocal action of which gives rise to what are called attraction and repulsion; and why need we hesitate to admit that similar, though not the same properties and powers may, in organized beings, be competent, while they are in mutual co-operation, to effect those actions in which life consists, and which of course terminate on the cessation of this co-operation, as the ingredients of a chemical compound cease to be agitated when their affinities are satisfied, and a watch stops when either the susceptibility of motion in its wheels is destroyed, or the requisite power ceases to operate upon them? It is true a living being appears to acquire no such repeated additions of new ingredients as a chemical compound, and no such frequent winding up as a watch, to avoid falling into the soon-established repose of the particles or masses of inorganic matter; but we must keep in mind that, in the latter case, while the properties and powers of the substances in co-operation are soon satisfied and exhausted, there is no inherent renewal of these substances, and, with them, of these properties and powers to renew their proper actions, whereas, in the former, it is the specific end of some of these actions to give rise continually to new aggregations of matter, distinguished by the same properties, and acted on by the same powers, as the old which have disappeared; so that the conditions of continual action are never for an instant suspended. It is not then that there is, in living beings, no addition of new ingredients, and no winding-up, but that this addition and this winding-up are incessant; and all that death implies, therefore, is a cessation of these as the necessary conditions of life or living action, not any abstraction of life, in its character of a substantial vital principle on which such action depended.

Observations on the Treatment of Strangulated Hernia, with a Case illustrative of an unusual form of that Disease. By John Jacob, M.D., Surgeon to the Queen's County Infirmary, and to the Maryborough District Lunatic Asylum, &c.

To the Editor of the Original London Medical and Surgical Journal.

SIR—My attention has been for a considerable length of time, at intervals, occupied by the consideration of the relative value of the different means adopted for the relief of strangulated hernia. Of these the taxis must, in my opinion, be considered as the principal and most effective, the others being chiefly directed to assist its action, or diminish the amount of obstruction it is intended to overcome.

On being called on to relieve a case of strangulated hernia, the first impulse of the medical attendant is to restore the bowel to its natural position in the abdominal cavity, by a manual effort. Should he fail, he then calls to his assistance those means best calculated to diminish the rigidity of the several openings and canals through which the bowel must pass; to remove the resistance offered by muscular contraction, as well as by a distended state of the abdomen generally, or of the portion of the bowel contained within the stricture, whether resulting from the presence of flatus, or from a loaded condition of the intestinal canal; to excite the peristaltic movements of the intestines themselves, with a view to the disengagement of the constricted portion, by the action of the muscular fibres of the bowel; or to induce a degree of contraction in those parts which envelope the sac, and thus aid

the efforts of the operator towards reduction.

A consideration of the structure of the different apertures through which inguinal or femoral herniæ make their escape, must satisfy us that by position alone can we expect to relax them to any extent—fomentations may have an effect, but I do not think that any person who has ever divided the stricture of a strangulated hernia can be persuaded that such applications as extract of belladonna can be really productive of benefit. As the effect of position is a matter of some importance, I will defer my observations upon it till I come to remark fully upon the taxis.

Muscular contraction presents a serious obstacle to the reduction of hernia: the patient can with difficulty be prevented from retaining his breath and straining violently when any attempt at reduction is made: the opposition thus afforded may be estimated by a consideration of the difficulty with which a reducible hernia can be retained in the abdomen of an infant while crying. How much more powerful must be the efforts of a full-grown man straining with all his force! The subjugation of these efforts constitutes one of the great advantages resulting from the use of those remedies calculated to induce muscular relaxation. Fomentations, the lancet, and warm bath, will, in the first instance, be had recourse to, when it has been ascertained that the hernia cannot be readily reduced, fomentation being eligible from first to last, unless when it may be found necessary to supersede it by the application of cold. The use of the lancet must, of course, be regulated on the same principles as in other diseases, due caution being observed with old or debilitated patients, with persons of broken down constitutions, and in those cases which have been permitted to run on for some days without assistance. The use of the bath is regulated on similar principles, both being intended to reduce that prostration of the muscular powers which presents the most favourable opportunity for reduction.

No time should be lost in endeavouring to induce the bowels to act. Purgatives, by the mouth, are often administered with considerable advantage. I can by no means coincide with those who regard them as objectionable, and calculated to increase inflammatory action, when judiciously regulated; if extreme irritability of the stomach exists, or if the progress of the case be far advanced, they must be used with considerable circumspection. Injections are unattended with any disadvantage, and should be perseveringly persisted in, till relief be obtained, or the operation is had recourse to. My custom, for some years, in cases of obstinate constipation, as well as in those of strangulated hernia, has been to introduce the œsophagus tube of the stomach pump as far as it could reach. The

large intestines, indeed the whole course of the intestinal canal, below the stricture, can thus be emptied of their contents, by which the abdominal parietes are rendered more flaccid, and the obstacles to reduction considerably diminished. It is very desirable to remove the accumulated gases, and this object is most readily effected by the introduction of the tube. I cannot, however, coincide with the opinion of Mr. O'Beirne, who has, in his work on Defecation, more particularly directed the attention of the profession to the advantages attending the introduction of the flexible tube, in supposing that the removal of flatus from the intestines will usually be followed by the escape of that contained in the strangulated portion of the bowel, and consequent reduction. When we bear in mind the yielding nature of the intestinal canal and abdominal parietes, we cannot suppose that the accumulation of flatus presents so very serious an obstacle to the reduction of hernia, that its removal will in many cases be sufficient to effect that object. It has, I perceive, been recently proposed to discharge the flatus from the strangulated bowel, by means of a very fine trocar and canula, but I can scarcely imagine that such a practice is likely to be generally adopted; for were it even altogether unattended with danger, which I cannot suppose, I am by no means satisfied that the emptying of the bowel of its gaseous contents *in that way*, could be considered advantageous. It is most desirable to discharge the flatus from the hernia, along the intestinal tube, as it tends more or less to dilate the stricture in its progress, and is generally followed by complete reduction. For the emptying of the bowels below the stricture, whether of their gaseous or more solid contents, the use of the gum elastic tube, and the administration of enemata by means of it, will be generally found sufficient. The tubes sold as Mr. O'Beirne's, with the enema apparatus, are not, in my opinion, sufficiently long: the œsophagus tube answers the purpose better; the orifice in the point of Mr. O'Beirne's is an advantage, and can be readily made in the common stomach tube. Some difficulty is occasionally encountered in the introduction of the tube, which may be found to hitch against the promontory of the sacrum and then fold upon itself in the rectum; it may, however, be directed by the finger introduced as high into the bowel as it can reach. Should the obstacle be situated higher up, it will be best surmounted by throwing in part of the injection, pressing the tube gently forward at the same time, and repeating this manœuvre as often as its progress may appear arrested. After it has been satisfactorily introduced, it is better to allow it to remain for some time, for the purpose of throwing up an injection when necessary: an intelligent attendant should sit beside the bed, and keep a finger applied on the orifice, to regulate the escape of the

contents, permitting flatus or feculent matter to be discharged, or causing the injection to be retained sufficiently long to produce its effect. A quantity of warm water may be occasionally thrown up, which will have the effect of encouraging the intestine to contract; and, in cases of obstruction of the bowels from accumulation, may have the effect of detaching scyballæ or other injurious collections. It has been even suggested that the suction of the pump may be made available for the purpose of clearing out the bowel, but this attempt should be very cautiously made, as the intestine would be very liable to come in contact with the eye of the tube, and might be, consequently, injured. A very poor man, far advanced in age, has been in the habit of coming, from time to time, to the county infirmary to seek relief from obstruction of his bowels; on three occasions he presented himself labouring under all the symptoms of intussusceptio, which had remained some days unattended to, and his condition was most unpromising, the vomiting and hiccough being so constant that purgatives could not be retained on the stomach. He has been invariably relieved by the use of the long tube, the enormous distention of the abdomen being immediately reduced by a long-continued discharge of a considerable stream of gas, which followed its introduction; an injection being thrown up, the bowels were readily induced to act, and the patient quickly recovered. An almost incredible accumulation of potatoe skins was found to be the cause of this poor fellow's sufferings—and many are the evils entailed upon the impoverished peasantry of this country by the wretched diet with which their unenviable existences are sustained. For infants, a moderate-sized gum elastic catheter, adapted by a brass top to the enema syringe, will be found very convenient. The tobacco enema possesses the double advantage of inducing that degree of debility and muscular prostration which facilitates so materially the successful application of the taxis, as well as of exciting the peristaltic action of the intestines, which has in itself been found sufficient to withdraw the bowel within the abdomen. In cases of obstinate constipation, unattended with hernia, it will also be frequently found to relieve the patient when all other remedies may have failed. It is, however, to be regretted that its effects are so uncertain that they cannot be reckoned upon with precision, some individuals experiencing but little change, while others suffer alarmingly under its influence. It must, nevertheless, be regarded as a powerful agent in the treatment of hernia, to which recourse should generally be had before proceeding to operation. It had better be administered by means of the common pipe, as it would not be desirable to throw it up too high.

Cold applications, whether composed of

pounded ice, or refrigerating mixtures, are highly beneficial, as well by keeping down inflammatory action, as by inducing a degree of contraction in the envelopes of the hernia, which has been occasionally found sufficient in itself to effect reduction.

Of all the means at our disposal, the taxis must be considered by far the most efficient in the treatment of this formidable disease. To direct particular attention to this subject is the principal object of this paper, for I fear that there are many surgeons who do not consider it, what it really is, as the sheet anchor on which they are to trust. I believe it too often happens that the knife is had recourse to in cases which might be relieved by the judicious application of the taxis. Many surgeons feel too great timidity in the application of the necessary degree of force, lest they might rupture the intestine; and others, if they do not find their efforts quickly successful, abandon them too soon. The degree and duration of the force which may be used must be in a great measure regulated by the condition of the hernia and the length of time during which it may have been strangulated. If it has been for some days in a state of constriction, and that there is consequently much reason to apprehend that a tendency to gangrene may exist, the utmost caution must of course be exercised, as the bowel may be expected to give way under a comparatively moderate degree of pressure; if the symptoms of strangulation have been present for many days, if the hernia be discoloured, and gaseous infiltration of the cellular tissue has taken place, it becomes a subject of grave consideration whether the taxis be at all admissible; and if these symptoms are accompanied by that cessation of pain, frequent hiccough, and alarming sinking of the powers of life, which render the nature of the case still more unequivocal, its application cannot, of course, be ventured upon. If, on the other hand, we have the advantage of seeing our patient early, we can have recourse to the taxis with a degree of confidence which will materially conduce to its success. Whenever we are about applying it, the patient should be placed in the position best calculated to relax the abdominal parietes and the several apertures through which we have to return the hernia. The flexion of both thighs to right angles with the trunk, and the rotation inwards of that belonging to the side at which the hernia may exist, will generally be found sufficient for this purpose; the elevation of the pelvis, if readily effected, would also be attended with advantage. One hand should then be applied over the surface of the hernial tumour, and a general degree of compression made over its entire extent, the pressure being at first very inconsiderable, but afterwards increased to that degree which the necessities of the case may require; the thumb and two first

fingers of the other hand should at the same time be applied as near the neck of the sac as possible; with these also a considerable degree of pressure may be made, and progressive movements performed in the direction in which we are anxious to forward the hernia, as it were, "bit by bit." The application of a steady, increasing, and long-continued pressure over the surface of the tumour, is by no means the least important part of the proceeding; it tends, not merely directly to reduce the hernia, but, should there be delay or difficulty in effecting this object, it will assist in mechanically dilating the stricture, by the application of an expanding force, by means, if the hernia be intestinal, of the pressure of its contents, whether gaseous, fluid, or more consistent, acting from within it, on the same principle as the plan proposed by Arnott for the dilatation of strictures of the urethra.

Another effect to be expected from it is a diminution of the thickened, I may almost say oedematous, condition of the contents of the sac so commonly observed. This pressure should be kept steadily applied with but little intermission; the efforts at the neck of the sac being from time to time repeated, its amount may be in some degree regulated by the nature of the contents of the sac, as it may be much more freely used if there be reason to suppose that the hernia be omental rather than intestinal; percussion will be found useful in assisting the diagnosis. It will often be found that under the diffused pressure the hernial tumour will become slowly and insensibly somewhat softer and more flaccid: when this is observed, its speedy reduction may be confidently anticipated, and will be forwarded by the use of the second hand placed at the neck of the sac. Moderate experience in the careful application of the taxis, in cases of strangulated hernia, will enable the surgeon to form a pretty accurate opinion of the probability of reduction without division of the structure; but it is only from attention and practice that this tact is to be acquired. If the hernia be small, and of firm consistence, a much shorter period of time will determine whether relief is to be obtained without operation. Pressure may be applied more directly, and with greater force, than if it were of a larger size; the slow dilatation of the stricture, by the action of diffused pressure over the surface of the hernia not being to be expected. In the small firm hernia, reduction will commonly take place suddenly, and with a jerk; in the larger, the effect will generally be more gradual and slow. When we find it continues firm and unyielding, after a careful application of the taxis shall have been for some time persevered in, obstinately to follow it up would be most injurious. It is the use, not the abuse, of the measure which I recommend, and I am induced to do so from having been called on, in more cases

than one, to assist at the division of the stricture, when I succeeded, with comparatively little difficulty, in reducing the hernia, without having recourse to the knife. It appears that the value of the taxis, and the importance of a careful and persevering application of it, have received in France that attention which they merit. In the *Journal des Connaissances Medicales*, for January, 1834, will be found a description of the mode adopted by M. Amussat for carrying it into effect, from which I have translated the following extract* :—

"The patient should be placed in such a position that the pelvis shall be as high, and the base of the thorax as low, as possible. To effect this, he may be placed upon a plane, considerably inclined, formed of a mattress doubled, the upper fold extending beyond the lower, the inclination being, if necessary, further increased by the use of pillows or bolsters. The buttocks of the patient should be settled on the thick part of the mattress where it is doubled together, and the trunk extended along the inclined plane, which the remainder of it forms. The head should be slightly flexed upon the chest by means of a pillow, the thighs bent to relax the abdominal parietes, and the entire body slightly turned on the unaffected side. The operator, stationed at the affected side, should embrace the tumour with both hands, knead and handle (*la manier*) it, performing a species of alternate traction and compression. This manipulation, performed at first slightly and with precaution, should insensibly be rendered more and more vigorous, without however inducing too much pain. It is indispensable that the manœuvre should be light and gentle at first, becoming gradually more powerful, and that it shall be steadily, and without relaxation, persevered in till the reduction be effected. It must be perfectly understood that the pressure should be neither abrupt nor jerking, all efforts being directed in the course of the passages through which the hernia may have escaped. Both time and patience are essential to the success of the operation, and other means, such as baths, bleeding, leeches, cold applications, &c., may be called to our aid, as being by no means prevented by the proposed plan. Experience will however prove that it is in itself abundantly sufficient to effect a cure."

A case follows of a strangulated hernia of four days' standing being reduced by a laborious application of the taxis, in the manner above described, for an hour and a half, the efforts of two other surgeons having previously proved unavailing.

I will conclude this paper, which I have endeavoured as far as possible to condense,

* I quote from *Encyclographie des Sciences Medicales*, Fevrier, 1834.

with a view to rendering it more suitable for a weekly periodical, by the recital of a case of congenital hernia. of unusual occurrence, which I recently had under my care.

I was called, on the evening of the 30th of November, to visit a farm labourer, named Michael Whelan, aged twenty-one, who, while walking to chapel, about twelve hours previously, became suddenly attacked with violent pain in the lower part of the abdomen, which was immediately succeeded by severe vomiting, and he was compelled to seek assistance in an adjoining house, where I found him. The symptoms increasing rapidly, a gentleman resident in the neighbourhood abstracted a large quantity of blood, and administered a dose of castor-oil with spirit of turpentine, in the forenoon. Pain intense; vomiting frequent; no dejection during the day. When visited by me, his agony was extreme; pulse rapid, small and hard; abdomen tender, and its muscles extremely rigid; constant vomiting. On examination, I found in the right inguinal region an oval tumour, extending from within about an inch of the anterior superior spine of the ilium nearly to the external abdominal ring, flattened, with an undefined margin, tense, slightly elastic, emitting an indistinctly tympanitic sound on percussion, and very tender; it appeared to occupy the inguinal canal, but extended beyond the internal ring towards the spine of the ilium. The external ring was small and rigid, unoccupied by the spermatic chord, nor could the right testis be found in the scrotum. Patient was incapable of stating whether the testis had ever descended, or, if it had, when it might have disappeared. The case appeared involved in some obscurity; it might be one of strangulated hernia, or the symptoms might probably depend upon an inflamed condition of the testis impacted in the inguinal canal, the surrounding parts participating in the disease. I made a careful application of pressure, with a view to its reduction, should it be hernia: the effort proving unsuccessful, I immediately removed him to the infirmary in my gig. On his arrival he was somewhat exhausted from the drive: I had him placed in bed, and again made another ineffectual trial of the taxis: I however had not recourse to it with as much confidence as if the case were one perfectly clear. *Applic. hirudines, xxxvj. tumori et foci tepidi abdomini. Hirudinibus elapsis descendat in balm. tepidum postea repetr. foci. Injiciatur enema cathartm. statim et repet. alternis horis donec respondt. alvus. R. Pulv. Scammonii gr. x. submur hydrarg. gr. v, ol. croton guttam. Theriacæ, .q. s. ut fiat bolus, M. Cap. tal. 4tis horis ad effectm. Dec. 1st, 9. A. M. 34 leeches applied, bled freely, remained 25 minutes in bath of 98 degrees. Considerable debility induced; taxis again adopted without effect; had on before the*

other, after the bath; steeping continued till 4, A. M., during which time, the leech bites, bled freely. Has had three boluses; passed a very restless night, suffering from violent pain, and frequent vomiting of a greenish fluid. Expression of countenance much more anxious, p. 124, small and hard, thirst urgent, occasional singultus. Taxis again attempted in vain. A pupil was placed at the bedside to keep up a constant pressure on the tumour, by means of a soft sponge; fomentation of abdomen continued. 2 p. M. No remission of symptoms. Expression of countenance more favourable, eyes sunken, considerable blueness and shrinking of features; vomiting and hiccup much more frequent, discharge from stomach of feculent character, considerable tympanitis. Tongue dry, thirst urgent: when gratified succeeded by immediate vomiting, p. rapid and small, tumor more tense and unyielding, tympanitic sound on percussion more distinct. Pressure by means of the sponge kept up since last report. Another trial of the taxis, which having proved ineffectual, I decided upon immediately proceeding to the operation.

I made a free incision through the integuments along the entire extent of the tumour, from within an inch of the spine of the ilium, downwards and inwards to the spine of the pubis, traversing the situation of the external abdominal ring; the superficial fascia having been exposed, was also divided to the same extent upon a director; some cellular tissue having been removed, the external ring and aponeurosis of the external oblique muscle were exposed; in the course of the dissection, the superficial epigastric and external pudic arteries were divided and secured by ligatures. I cleared the abdominal ring, which was merely occupied by a small quantity of adipose substance, and having introduced a director, I dilated it for a little better than half an inch. I passed my finger into the inguinal canal, which I found distended by a turgid cyst containing fluid. I extended the opening in the tendon for about two and a half inches; the tumour, which instantly sprung out, proved to be the tunica vaginalis testis, distended to the size a large goose egg, of a dark purple colour, containing with the testis a portion of intestine, a considerable quantity of bloody serum, and some gas. Having laid it open, a considerable knuckle of small intestine presented itself, of a dark colour and much thickened; immediately behind this, lay the testis, somewhat enlarged by inflammation. I introduced my finger to the neck of the sac or tunica vaginalis, and found a remarkably close stricture above the edge of the transversalis muscle; with some difficulty, I introduced my nail within it, and upon this a very narrow Cooper's bistoury, and without further difficulty divided it; the patient expressed himself as instantaneously re-

lieved, and the intestine was readily returned. I endeavoured to draw down the testis towards the external ring, but could not succeed; it was indeed pretty obvious that it never had descended into the scrotum. Under these circumstances, I deemed it more prudent to return it into the abdomen. Having done so, I still found that the tunica vaginalis, which had undergone so much distention, could not be prevented from hanging loosely into the wound. I conceived it best to remove it, which I accordingly did, to within about half an inch of the testis. I closed the wound with three sutures, and slips of silk plaster*, applied a dosil of wet lint, and placed the patient in bed with the limb in a flexed position.

Immediately after the operation, reaction took place, the countenance became composed, the skin warm, and the pulse expanded to a full and free beat, and patient enjoyed some sleep, for the first time since the setting in of the disease. 9 P. M. Reaction increased considerably in the course of the afternoon. Face became flushed, skin hot, and circulation excited; occasional vomiting. Having had no dejection, a purgative enema was thrown up at seven o'clock, which was soon succeeded by a couple of feculent stools, and caused considerable relaxation of the abdomen. The inflammatory action not having, however, subsided, 24 ℥ of blood were abstracted at eight; the pulse yielded; considerable debility but no syncope was induced, and patient now feels cool and comfortable.

Dec. 2d, noon. Slept well, free from pain, no vomiting, considerable fever, headach, countenance flushed, skin hot, respn. 36, p. 132, full and hard. Tongue furred, thirst urgent, dej. v, fluid. Wound in good position; appears to be uniting along 9-10ths of its extent. Lavantur facies thorax et artus superiores subinde, 5, P. M. Much relief from sponging, slept a good deal, heat of surface and headach diminished, thirst less urgent, p. still accelerated. No dejection. 9, P. M. profuse diaphoresis at six, sponging discontinued in consequence, slept at intervals, headach diminished, p. 112, full and soft; respiration 34, skin hot and soft, but free from perspiration at present. No dejection. R̄. pulv. Jacobi, gr. v; submuria. hydrarg. gr. iij m. capiat statim etsi opus sit crasumat. mist, cath. ℥ iv. summo man.

* This plaster, which is not in general use, is a remarkably nice application, being very adhesive and not tending to induce inflammation of the skin. It is prepared by spreading a strong solution of isinglass, in spirits, upon fine oiled silk, by means of a brush; when about to be applied, it only requires to be wetted with a damp sponge. It is mentioned in Dr. Thompson's work on Inflammation. It was by Mr. Liston that I saw it first used.

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Dec. 3rd. morning. Improving, fever much abated, p. 98, full and soft, t. clean; no dejection, though the aperient medicine was administered this morning. Abdomen rather more tumid; wound looks favourably, union appears to progress, one suture removed. Injectio enem. oleos 3tia q. q. hor ad effect. post horas sex capiat haust infra prescripti opus sit. R̄. ol. ricini, 3vj. vitel ovi. dimidium, ter et adde gradatm. aq. menth. 3ij. R̄. sennæ sacchari. sing. 3ij, M. 4, P. M. easy, slept some, has had three copious stools, from the enemata without the draft. 9 P. M. goes on well, dej. ij.

Dec. 4th. Free from fever, b. open, lips of wound separated, limb secured in flexed position, and adhesive straps applied.

Dec. 5th. continues to advance as regards his general health; wound suppurating freely and granulating: no union by first intention.

Nothing remarkable occurred in the further progress of the case; the wound was rather slow to heal—an observation which holds good with respect to the generality of our cases in the hospital for some months past. It however filled up, though tediously, with granulations, and was healed completely by the second or third week of January. Patient was discharged recovered, by the first of February.

I have of course not introduced this case as peculiarly suited to illustrate the principles laid down in the preceding paper: nor should I perhaps have considered them sufficiently interesting in themselves to deserve being brought under the notice of the profession. In connexion with a case of some interest, they may, perhaps, by some be considered as worth perusal.

Maryboro, Feb. 14th, 1835.

—o—

A NEW PRACTICAL FORMULARY

OF HOSPITALS, OR A

Collection of Formulas of the Civil and Military Hospitals of France, Germany, Italy, Great Britain and Ireland, &c., containing the Indication of the Doses in which simple Substances, magistral and officinal Preparations of the Codex are administered, the use of New Medicines, and general receipts on the art of prescribing. By M. EDWARDS, M. D., and P. VAVASSEUR, M. D., of the Hospitals of Paris—1834. Translated and augmented by M. RYAN, M. D. &c. &c.

(Continued from p. 183.)

DIURETICS.

Hydro-sulphurous Liquor for Baths. H. of Germ.

R̄. Calcis sulphatis, ℥ iv;
Acidi tartarici, ℥ i;
Aquæ, Ovij.

Liqua, et funde in balneo.

P

*Antipsoric Solution.**Liqueur, No. 1, H. St. L.*

Rx. Potassæ sulphatis, ʒ i—ʒ ij;
Aque, Oj.

Liqueur, No. 2.

Rx. Acidi muriatici, ʒ j—ʒ ij;
Aque destillatæ, Oj.

Pour ʒ j of each liquid into ʒ iv of hot water.

EXTERNALLY.*Antipsoric Lotion. Hot. D.*

Rx. Potassæ sulphatis, ʒ iv;
Aque, Oj;
Acidi sulphurici, ʒ iv.

Used in the treatment of scabies. The affected parts should be fomented two or three times a day with this lotion; at the same time simple baths should be used.

SULPHURATED MINERAL WATERS.

These waters are stimulating, causing an abundant perspiration, a considerable secretion of urine, and act in the same manner as the sulphate of potassa. They are employed both internally and externally in a great number of cases; in scabious eruptions and many other cutaneous affections; in chronic catarrhs, when it is necessary to stimulate, in a gentle manner, the mucous membrane which lines the bronchial and pulmonary cells, in the treatment of scrophulous affections, and of enlargement of the lymphatic glands. They are also recommended in chronic rheumatism, ankylosis, gout, &c.

Water of Baréges.

INTERNALLY.—Three or four glasses a day.

EXTERNALLY.—In baths, lotions, and dashes.

Artificial Water of Baréges. P.

The same doses.

Water of Bonne.

INTERNALLY.—Oj—vj, daily.

EXTERNALLY.—In baths, lotions, and dashes.

Eau de Bonne Artificielle. P.

The same doses.

Water of Cauterets.

INTERNALLY.—Two to six glasses daily, alone, or diluted with milk.

EXTERNALLY.—In baths, lotions, and dashes.

Artificial Water of Cauterets. P.

The same doses.

Water of Aix la Chapelle.

INTERNALLY.—Two to five glasses daily. It is a purgative when a greater quantity is taken.

EXTERNALLY.—In baths, lotions, and dashes.

Artificial Water of Aix la Chapelle. P.
Same doses.

Water of Enghien.

INTERNALLY.—Two to six glasses daily.

EXTERNALLY.—In baths; but when used the temperature should be raised.

Sulphuretted or Sulphurous.

[“ENGLAND.—Codsawood, carbonated; Dudley, carb. cal. and chal.; Llandrindad, chal.; Shapmoor, sal.; Inglewhite, chal. and carb.; Mandley and Shettlewood, sal.; Westwood, chal.; Wirksworth, sal. and chal.; Askerson and Broughton, sal.; Harrowgate and Loansbury, sal.; Normanby, cal.; Rippon, sal. and cal.; Shipton, sal.; Hartlepool, chal. and sal.; Gainsborough, chal. and cal.; and Nottingham, saline.

“IRELAND.—Leinster, Jerpoint, Milmont, Lucan, Golden-Bridge. Munster.—O'Brien's - Bridge. Connaught.—Anaduff, Drumasnave, Dronisnamullock, Athimonus. Ulster.—Swadlinbar, Derryvester, Derindaff, Owen Bruen, Ashwood, Drumgoon, Killasher, Lisbeak, Michan, Derryinch, Aghaloo, Pettigree, and Dromore.

“SCOTLAND.—St. Bernard's Well, Corstorphine, Moffat, sal. and carb.; Castleleod, sal.; and Fairburn, cal. and sal.

“FRANCE.—Montmorency, Bagnieres, Bagnols, Bourbone, sal.; St. Amands, Cauteres, chal.; Mont D'Or, Motte, Baresges, cal.; Plombieres, sal.; Dax, Bonnes, and Cransac.

“NETHERLANDS.—Enghien.

“GERMANY.—Aix la Chapelle, cal. and sal.; Borset, alk.; Baden, Chaude Fontaine, cal. and sal.; Frankfort, sal.

“SWITZERLAND.—Alvenenan; and in ITALY—Baia, and perhaps Viterbo.”—Treatise on Mineral Waters, 1828. By M. Ryan, M.D., &c., &c. See author's article in London Encyclopedia, Thompson's London Dispensatory, &c. T.]

GUAIAIACUM.

The wood and resin of guaiacum act as general excitents, and as diaphoretics. They are employed with advantage in gout, chronic rheumatism, certain chronic affections of the skin, ancient and obstinate venereal diseases, scrophulous affections, &c. The wood is generally used in syphilis; the resin is preferred in rheumatism, gout, &c. In large doses, this resin becomes a purgative.

Subst. incomp.—Mineral acids, &c.

INTERNALLY.—Wood. *Decoction.*—ʒ ss—ʒ ij, in Oij of water reduced to ij.

Decoction de Gayac composee.

Oj—ij during the day, a glassful at a time.

Decoction de Gayac composee et purgative. P.

ʒ viij—Oj, daily.

Tincture. P. ʒ ss—i, in a potion, or in sudorific drinks.

Resin. Gr. x—i, in pills, or in an emulsion.

Decoction of Guaiacum. H. de. la. Ch.

Rx. Guaiaci, ʒj;
Aque, Oij;
Glycyrrhizæ, ʒi.

Coque ad tertiam partem.

Employed as a sudorific in certain cases of chronic rheumatism, syphilitic affections, &c.

Sudorific Ptisan. Ven. Hosp.

Rx. Guaiaci,
Buxi, ā ā ʒi;
Radicis arctii lappæ,
——rumicis patenticis, āā ʒss;
Baccarum juniperi, ʒij;
Aque, Oiv.

Coque ad dimidiam; sumatur cyathus pro dosi.

Compound Decoction of Guaiacum. H. of Engand.

Rx. Guaiaci, ʒij;
Uvæ passæ, ʒij;
Sassafras, i,
Glycyrrhizæ, ā ā ʒi;
Aque, O x.

Coque guaiacum et uram passam simul ad Ov et adjice alia: in dosis Oj—ij quotidie.

[There is a compound decoction of "sweetening woods," used by empirics in Ireland, which often succeeds in scrophula, when the subjects of it are under the adult age, or, in other words, when the disease usually disappears by the use of tonic remedies, and especially after the administration of iodine, or its various preparations. The following is the preparation:—Four ounces of guaiacum wood, of sassafras, of sarsaparilla root sliced, of liquorice root, and of crude antimony. The three first articles are boiled in twenty-four pints of water to one half, and during the process the antimony is inclosed in a piece of new flannel and suspended in the vessel, by being tied to a lath passed over it. The liquid, when reduced to one half, is designated the "strong drink." The ingredients are again boiled in twelve pints of water, and reduced to six—this is called the "weak drink."

The patient is ordered a pint of the first, three times a day; and a pint of the second twice daily. He is directed to live on these drinks and unleavened bread, and his ulcers are dressed daily with an ointment composed of an ʒj ung. resinos. and a ʒi of red precipitate (oxyd. hyd. rub.); or elder ointment alone is employed. He is compelled to continue these remedies and diet, until his ulcers shew a tendency to heal, no matter whether the period is one or three months. I have known many cures effected by this plan, though apparently and obviously different from received medical doctrines, after respectable physicians and surgeons had failed. I knew too persons, who gained a livelihood by curing ("evil") scrophula

by these means: and they revealed the nature of their remedies to me, after having relieved and cured one of chronic dysentery, and the other of sciatica. When the regular medical attendants fail, empirics are applied to, and the above are their remedies. I astonished both the "doctors," by referring to the compound decoction of guaiacum, and also elder ointment, but their reply was, "The articles are not boiled or prepared as I advise." The statements and experiments of Dr. Hancock, in the Transactions of the Medico-Botanical Society of London, 1829, clearly prove that the ebullition of sarsaparilla destroys that article; but I can vouch for the truth of the statements in this parenthesis. T.]

Sudorific Ptisan.

Rx. Guaiaci,
Sarsaparillæ,
Smilacis, ā ā ʒii;
Aque, Ovj.

Macera per horas duodecim, dein coque ad tertiam partem at adde,
Sassafras, ʒij. Macera per horam unam et cola; sumat cyathum pro dosi.

Antiarthritic Powders. H. of Germ.

Rx. Resinæ guaiaci,
Tartari purificati, ā ā grs. xv.

Fiat pulvis tei quaterve in die, ex cyatho infusi tilizæ sumendus.

Boluses of Guaiacum. H. of England.

Rx. Resinæ guaiaci, ʒii;
Ipecacuanhæ,
Opii, ā ā gr. vi;
Conservæ rosæ, q. s.

In bolos sex divide, quarum sumat unam, duas vel ter in die.

Mixture of Guaiacum.

Rx. Resinæ guaiaci, ʒiss;
Sacchari, ʒij;
Mucilaginis gummi acaciæ, ʒii;
Aque cinnamomi, ʒviij.

Tere guaiacum et saccharum cum mumcilagine, et adde aquam cinnamomi.

The dose of this mixture is ʒss—ʒii twice or thrice a-day, immediately after which a small cupful of tepid barley-water should be taken.

Diaphoretic Potion.

Rx. Tincturæ guaiaci, ʒss;
Aque destillatæ,
——petalæ rhæados, ā ā ʒii.

Fiat potio, cujus sumat cochleare magnum singulâ horâ.

(To be continued).

Abstract.

An Introductory Lecture on the Studies, Duties, and Qualifications of the Medical Practitioner. Delivered at the Sheffield School of Anatomy and Medicine, by Corden Thompson, M.D., &c. Sheffield. 1834. 8vo. pp. 38.

We ought to have noticed this lecture before, but it has some how or other escaped attention, amid the crowd of pamphlets which pour from the press faster than Goths from the frozen loins of the populous North. Dr. Corden Thompson is a learned and philosophical man, and a distinguished practical physician; his opinions, therefore, on so important a subject as the education and character of the medical practitioner, cannot fail to be read with interest.

The necessity of those preliminary studies which give liberality and expansion to the mind are properly enforced in the following passage:—

“If, gentlemen, there be a profession of which the members ought to receive a pre-eminently liberal and extended education, beyond all question, it is that of physic. There is none, as I have elsewhere insisted, so immediately and intimately connected with the welfare, the comforts, and the happiness of men, during the period of what we call life; none, in the members of which mankind should be able to repose more implicit confidence, nor for whom higher esteem should be entertained. Deprived of health, men do but vegetate, as it were, and breathe a sickly atmosphere of morbid hallucinations; life has no enjoyment, not having that which imparts pleasure to existence. Who that ever laboured under severe bodily ailment knows not the inestimable value of health? Yet, nor power, nor wealth, nor friends, however numerous, can restore this treasure when lost; it is the healing art alone that here proves efficacious. Surely, then, the education of its professors ought to constitute, in a State, an object of no trifling solicitude. It is, in fact, when considered in relation to human suffering that the utility and importance of the healing art become fully apparent. Coeval with the origin of man, the actions of whose frame are liable to aberration from a thousand causes, the practice of physic and surgery has ever been an indispensable requisite, even among the rudest and most barbarous of our species. A still higher interest and importance does it assume in civilized and polished nations where life has greater value. With them, too, luxuriant refinements, injurious habits, and the too often absurd customs and regulations of

society, by multiplying the sources of disease, demand at the same time increased means of succour and obviation. Here it is that ailments appear under more insidious guises and proteiform shapes, and hence, exact greater skill and discernment in detection. There are few circumstances, indeed, in which it is more necessary for a man to possess a cool, collected, and unbiassed judgment, freedom from prejudice, acuteness of perception, and tact in eliciting truth, than at the bedside of a patient. Here, gentlemen, effeminate tenderness, and the officious kindness of well-meaning friends prove equally unavailing. It is not the simplicity of good-natured ignorance which profits on such an occasion, but the discernment of a clear and experienced understanding. The medical character, in fine, ought to embrace, above all things, and in the first place—for the absence of which nothing can compensate—a sound and enlightened judgment.”

The author, admitting the importance of the classical languages to the medical practitioner, insists with much justice on the far higher importance of an accurate knowledge of his native tongue. He makes some animadversions on an oration of Sir Henry Hallford, one of the chief advocates of what may be styled the monkish system of medicine, which, though severe, must be acknowledged to be perfectly just.

“What excuse shall be pleaded for one, who, pretending to a liberal education, and exercising a liberal profession, is nevertheless incapable of writing or using correctly his native language? Examine, Gentlemen, the recent oration of Sir Henry Hallford, President of the Royal College of Physicians. Sir Henry, we are told, is a classical scholar; and truly, if a profusion of Latin scraps in composition entitle a man to be thought so, we must admit the claims of Sir Henry to scholarship. But which, or how many, of the reputed admirable effects of classical learning on the mind does the oration in question evince? Certainly if there be virtue in that sort of writing which is neither one thing nor another; an insipid lifeless compound of English and Latin; a kind of

“party-coloured dress
Of patched and pie-balled languages,”

neither striking in matter, nor forcible in manner; then does Sir Henry's oration possess merit. Power, energy, eloquence, originality it has none; not even the style of a British writer; and oftener than once do we find the author betraying unacquaintance with the English tongue.”

“The first, then,” continues Dr. Thompson, “the most useful, the most essential and indispensable acquisition that a person can make, is a knowledge of his native lan-

guage: and greatly is it to be lamented that this knowledge is so little attended to in the education of medical practitioners. But the English, Greek, and Latin, are not the only languages of which the pupil must acquire a knowledge; he must likewise study the French, the German, and the Italian. The two former of these, indeed, he ought to be thoroughly and familiarly acquainted with; and permit me to say from experience, that I consider their utility, in regard to our profession, infinitely greater than that of the dead languages. They are, in fact, the grand storehouses of modern science; without a knowledge of them, he cannot even keep pace with the advancement of the latter, much less have any pretensions to medical scholarship."

We cannot say that we quite agree with our author as to the relative importance of the ancient and modern languages. English is unquestionably the most important of all languages to an English practitioner, and if he be ignorant of this, he cannot fail to make himself ridiculous, whatever other accomplishments he may possess.

With respect to the modern European languages, although we regard a knowledge of the French, German, and Italian, as quite indispensable to a well informed practitioner, we are, on the whole, disposed to consider that of the Greek and Latin as of at least equal if not greater importance.

A medical man, ignorant of French or German, may read translations of many of the most valuable authors in those languages; but one ignorant of Greek and Latin knows not the etymology, nay, can hardly understand the meaning, of the most familiar terms of his own art. We will not dilate here on the high standing which classical learning gives a man in society; or on that unaccountable power which the study of antiquity possesses, of imbuing the mind with a generous enthusiasm, and casting an imaginative charm around our progress in the severe paths of science. The matter-of-fact men may laugh if they please, but there is a serene pleasure, and a high inspiration, in hearing the great of yore speak, as from the stillness of past time, in their own bold and eloquent accents, while in renewing our academical intimacy with each venerable father of our art, we exclaim,

Accipio agnoscoque libens! ut verba
parentis

Et vocem Anchisæ magni vultumque
recordor!

"Languages, however," continues our author, "whether native or foreign, are but aids or helps; the means by which a knowledge of animate and inanimate objects is attained. The pupil must, further, be initiated in the study of general history, geography, and mathematics. The latter, as Locke has admirably remarked, are to be cultivated not with the view of becoming a mathematician, but of learning the right use of reason; and this use they will inculcate better than all the classics of antiquity.

"From the pure, the pupil will pass to the study of the mixed mathematics; that is to say, those branches of knowledge commonly included under the head of physics, or natural philosophy, namely:—mechanics, hydraulics, optics, acoustics, astronomy, meteorology, galvanism, and electricity. Chemistry is usually not entered on till the studies strictly medical are commenced; and along with it mineralogy and geology are commonly cultivated.

"As a preparatory study, and one of a high order, we ought by no means to overlook mental and moral philosophy.

"After the student, then, has been instructed thoroughly in the theory and use of his own tongue; after he has acquired a tolerable knowledge of the dead and living languages; after he has been taught the elements of mental and moral philosophy, general history, geography, mathematics, and natural philosophy, he will be qualified to enter with advantage on those studies which more immediately appertain to his future vocation. And without these preparatory studies, to a greater or less extent, he will find his future progress difficult, slow, and unsatisfactory. In my opinion, gentlemen, no one ought to enter on professional instruction before the age of eighteen. By that time he may, with tolerable abilities, be sufficiently grounded in the elements of those various branches of knowledge, which he will subsequently cultivate, and become more intimately acquainted with, in proportion as he advances in life, and at the same time as he is extending the boundaries of his scientific acquirements, and pursuing his medical studies.

"Let us now briefly survey the course of instruction which should be followed in respect to the latter. They present a range of the most important and extensive description. To enumerate, for instance, the various particular subjects that necessarily demand attention: anatomy and physiology, human and comparative; anthropology; natural history and botany, chemistry; pharmacy and materia medica; toxicology; dietetics and hygiene; general pathology—which treats of the nature, seat, causes, progress, terminations, symptoms, diagnostics, prognostics, morbid appearances, and principles of treatment, of disease in general; special pathology,—having for its object the nature and treatment of particular diseases, both medical and surgical; clinical medi-

cine and surgery; midwifery; state medicine; medical police and jurisprudence; lastly, bibliography, and the history of medicine."

Many excellent remarks are made on the moral qualifications of the practitioner, among which we would recommend the following to particular attention, since it appears to us that many of our brethren are woefully flat in the region of *self-esteem*—or, to speak plain, that there is a miserably reptile spirit in the profession, as sufficiently evinced by the existing necessity for legislative interference, to lift us out of the mire of degradation, into which, if we had possessed a little more of the real "high moral feeling," we never could have sunk.

"Once more, gentlemen, the medical ought to be a man of the most upright and independent character; a man whose moral courage will not fail him when he has public duties to discharge. There are spirits low, and mean, and grovelling; spirits governed simply by the maxim, 'Put money in thy purse,'—and which for this purpose compass sea and earth; submit to indignity and insult; fawn and flatter; with the most oily tongues, assume the smoothest of faces; hesitate not to renounce their own judgment, nor even to prostitute conscience; are all things, in short, to all men, that by any means they may *secure practice*. Such men have their reward; not, indeed, in the conscious satisfaction of an upright, intrepid, and manly conduct; but in the merited contempt of their professional brethren, and an indwelling sense of degradation.

"He who, on subjects of public interest and importance relative to his profession, possesses not the courage and independence to assert and maintain what he deems just and right; who, through fear of some personal attain, sacrifices a public good; is unworthy of his profession. Well indeed would it be for the latter, did its members exhibit more generally that open manly independence which becomes them, and less of that servile and sycophantish spirit, which, whilst it is derogatory to the character of an honest man, betrays a consciousness of inferiority; of some lack of ability or acquirements; of some want of those general merits which may justly expect and claim success."

We beg, in conclusion, to recommend Dr. Thompson's lecture to our readers, as a judicious and philosophical survey of the education and qualifications of the medical practitioner.

Foreign Medicine.

On the Simultaneous Occurrence and Progress of Diseases of diverse Character, by Dr. Filesius, of Leipsick.

THE cicatrices which eruptive diseases leave behind them, are sometimes themselves the seat of a general irritation, and on the other hand are the parts most liable to respond to any cause of irritation; and ulterior disorders seem to have a special predilection for these points, causing in them, in some circumstances, condylomata, sarcoma, &c.

In his work on Syphilis, John Hunter says, "there is no such thing as a syphilitic itch, or a scorbutic syphilis." Two influences cannot simultaneously predominate in the body, two fevers cannot co-exist in the same individual, nor two local diseases affect one part at one time. The resemblance which endermic forms of syphilis bear to scorbutic affections, has been a source of the erroneous belief that both diseases co-existed in the same point. Both scurvy and syphilis have a tendency to cause eruptions of the skin, when it has any pre-disposing cause in it—an event more frequent in some than other parts of the body. The same person may at once have syphilis and small-pox, that is to say, the syphilis may have invaded the parts which possess the greatest predilection for it, whilst the small-pox seizes on those free from it. But if the two diseases were consequent on fevers, and if each of them was developed nearly at the same time after the fever, it is impossible that the two fevers should have caused eruptions at the same time, even in different parts, for the two fevers that had preceded the eruptions could not exist simultaneously.

What precedes naturally suggests the following questions.—Does not the ill success of inoculation of small-pox, and the inefficiency of its preservative power, proceed from the presence of some other disease at the time of inoculation—a disease which is opposed to the introduction of any other? Is it not owing to this circumstance that those great variations are remarked in the time between the action of the disease upon, and its appearance in the body? For instance, suppose a person to be inoculated and the wound not to inflame until a fortnight afterwards, would not this be owing to the existence of some other disease at the time of inoculation? And might not the cure of certain disorders be explained in this manner—the interruption or stoppage, for instance, of a gleet, on the outbreak of a fever?

I will endeavour to elucidate this doctrine by one of the numerous cases I have observed in my practice. On the 10th of March, I inoculated a child for small-pox, and it was remarked that I made very free scarifications. The 19th, the absorption of the virus seemed to be manifested by a

slight inflammation, redness, and tumefaction of the wounds. The 20th, and 21st, the child had some fever, which, however, was not variolous fever, for the inflammation had made no progress since the 19th. The 22nd, a full eruption appeared, but it was of measles, and the inoculated spots still remained stationary. The 25th, the measly eruption began to disappear, and on the 26th, and 27th, the inoculated points became inflamed; the 28th, this inflammation increased, and a little pus was deposited; the 30th, fever supervened, the variolous pustules went through their usual stages, and ended well.

It may be in like manner observed, that the venereal disease manifests at some more or less distant date from inoculation. May this not depend on a similar cause? Three individuals are exposed to the contagion on the same evening and at the same place. In one a chancre appears in a week; in the second not until a fortnight; whilst in the third, who, being inebriated, had laid down on the damp ground, a violent fever, with inflammatory sore throat, came on the following morning, and it was not until three weeks subsequently, and after the complete cure of those disorders, that he was attacked, not with chancres, but with a clap and bubos.

The following case seems to come under the same category. Charlotte P—, of Leipsick, aged 21, was admitted on the 3rd of July, into the Hospital St. Jacques, having a very full variolous eruption now proceeding to a cure. After being under treatment a whole fortnight, variolous spots rose at some points as high as a quarter of an inch. The previous symptoms of syphilis, and the condylomatous appearance of these pustules, left no doubt as to their syphilitic nature.—*Allgemeine Medicinische Zeitung*.

[This doctrine may be correct in general outline; but it is certain that variolous pustules and vaccine pustules have occurred simultaneously. An instance of this kind may be found at page 537 of the last volume of this Journal].

Extra-Uterine Pregnancy — Passage of the Fœtus by the Rectum.

Professor Francesco Petruni relates the following curious case. Theresa Monaco, 36 years of age, mother of five children, not having menstruated in August 1833, thought she was pregnant, and moreover had all the feelings experienced in her former pregnancies. Qualms, vomiting and pyalism continued for about a month; she then began to have acute pains of the hypogastric region, was agitated, delirious and sleepless. The abdomen was at one time swelled and tense, at other times supple and flat; there was continued pain in the lumbar region. The pains still continuing, doubts began to be entertained of her

pregnancy, the more as six years had elapsed since her last delivery. They were therefore fearful of a chronic metritis, a false pregnancy, or some other uterine disease. Her medical attendants could not agree on their diagnosis; and she merely confined herself to the use of cooling remedies. She passed almost the whole of the month of October with less pain; but towards the end of that month, which was the third of her pregnancy, the pains re-appeared with renewed violence; this relapse was attributed to mental emotions. Fever now did not leave the patient at all, and exacerbated every night: the emaciation became extreme. At the end of the third month, a hard, circumscribed tumour, inclined somewhat to the right side, was observed above the pubis; this increased in size and caused much pain. It was taken for a scrophulous tumour of the right ovary, and was unsuccessfully combated by iodine, hydriodate of potass ointment, cicuta, leeches, &c. In November, movements at first feeble and obscure, and afterwards very manifest, were sufficient to do away with all doubts of the pregnancy. Moreover, the mammae increased, and secreted serum. The intestinal constipation could not be overcome by the strongest purgatives; the transverse colon seemed visibly filled with matter; the whole abdomen was painful: the delirium was constant. Notwithstanding all these circumstances, the pregnancy was still disbelieved; and under the impression that the uterus was filled by accumulated menstrual secretion, and not by a fœtus, ergot of rye was prescribed. This augmented her sufferings and caused a flow of blood from the uterus, a clot, and a small membranous sac, which was taken for a false conception. After this, the tumour, which to this time had been very high, fell down into the pelvis, and the fœtal movements were no longer felt. The costiveness still persisted. The patient had an idea that her rectum was pressed upon and obliterated. She was incessantly teased with a desire to go to the closet. The whole of the 7th month passed in a state which seemed to threaten death momentarily. One day the tenesmus was so extreme that she could not resist the desire to introduce her finger as high as possible into the rectum, in which almost involuntary act, she discovered a hard and pointed body. After a second attempt, she had the courage to withdraw this body, which proved to be the lower jaw of a fœtus several months gone. The patient was then much debilitated, had fever, and the abdomen was hot and tumefied: the hypogastrium was also painful. To the constipation succeeded a flux of gangrenous and foetid matters. The following morning, Dr. Petruni introduced the forefinger of the left hand into the rectum, found the small aperture of amniotic sac, ascertained the present

bones, and, guided by his finger, introduced a polypus forceps: by this means he seized and extracted a bone, at the same time withdrawing his finger, in order to protect the soft parts. He repeated this operation as often as the patient could endure it. After having extracted divers bones of the cranium, and the whole of the vertebral column, he passed emollient injections into the sac. This he renewed on each of the four following days, until all the parts of the foetus were extracted. The treatment consisted of baths and injections into the sac, by means of an elastic tube. The injections were detergent and astringent; the fistulous opening was almost completely obliterated. The author thinks that the amnios will be absorbed. In a fortnight, the patient, who had been considered dying, was restored to her family. Four months have elapsed since that time, and she is in perfect health.—*Il Filiale Sebezio*, Dec. 1834.

New Purgative—Euphorbia Latyris.

According to experiments made by M. Martin Salon, at the Hôpital Beaujon, with this medicine, he has concluded: 1. That the oil prepared by expression, by alcohol or ether, is of easy employment: 2. That none of these preparations have any sensible operation on adults in the dose of two to eight drops: 3. That in a dose of 16 to 24 drops, the two first have decided emeto-cathartic properties, and the third one in the same dose is only purgative: 4. In the dose of two scruples to a drachm, the emeto-cathartic effects become more decided in the two former oils, even sometimes to cause syncope; the oil prepared by ether is equally purgative with that obtained by expression, purges somewhat more than the oil obtained by alcohol, and does not cause syncope, and must be raised to a drachm and a half in dose to produce vomiting also; 5. The maximum dose of any of them is three drachms; 6. They are applicable in icterus, gastric disorders, lead colic, vermination, &c.—*Gazette des Hôpitaux*, Feb. 7, 1835.

CASE OF VACCINATION INTERRUPTED BY MEASLES.

To the Editor of the Original London Medical and Surgical Journal.

[The following case has been received from a worthy Correspondent, Surgeon to the Hospital of a large provincial town.]

In the month of March, 1803, I twice vaccinated Martha, the daughter of John Maule, a farmer, then residing at Rothersthorpe, a village about three miles from this place; and each time the several punctures made in the arm proceeded regularly until the eighth or ninth day, when the areola began to form; but as it each time assumed an irregular or spurious appearance—the edges being serrated, and the colour that of the

damask rose, instead of a bright red, I very much doubted it proving effective, and expressed myself so to the parents, and a desire to vaccinate her again when a favourable opportunity offered. This was complied with, and she was in a few days sent here to school. On the 17th of April following, having a good subject, I vaccinated her again with lymph taken from the arm, making three punctures, all of which had taken, and proceeded regularly as the others had done, until the eighth day from the insertion of the lymph, both inclusive; but upon calling to see her on the morning of Saturday, the 24th of the month, I found her in bed, and very ill with ardent fever, the pulse and other symptoms resembling those that usually precede eruptive diseases; and I was fearful it would prove to be small-pox, as it was prevalent here at that time; some active fever medicine was prescribed, and the next morning an eruption made its appearance, which proved to be measles; during its progress through the system, which was in the regular way, as no untoward symptom appeared, the vaccine areola was suspended in its progress; but as soon as the measles had terminated, it assumed its regular course, and I never saw a better formed areola. I have repeatedly inquired after the subject of this case, and the last time I heard of her, she had been free from every symptom of variolous disease; and since writing the above, I have seen her father, who confirmed what I have stated, as far as he knows; he added, that she had been several years married, and was now residing at Harboro', 17 miles from hence.

This case would afford ample scope to the physiologist that had the inclination or time to indulge in it. My opinion at the time was, that the lymph, the two first times of its insertion in the arm, might have undergone some change, from heat or other causes, it having been conveyed in my pocket to the village, the weather being remarkably warm at the time, though it might have been occasioned by some latent disease in the system, obstructing its diffusion through it, and which I think was the cause in some cases that have since come under my superintendence.

10th Feb. 1835.

By a curious coincidence, we are enabled to refer our correspondent to a similar case, and some observations upon it published in the foreign department of our Journal of this week, under the head of "Simultaneous Occurrence and Progress of Diseases of diverse Character." We had written Dr. Filesius' case out when the above communication reached us.

The London Medical

AND

Surgical Journal.

Saturday, March 14th, 1835.

THE COLLEGE OF SURGEONS—NO INDICATIONS OF REFORM.

Hæc ego non credam Venusinâ digna lucernâ?

Hæc ego non agitem?

Juvenal, Sat. 1. 51.

THE edifice in Lincoln's Inn Fields is fast rising from its temporary ruins, and expanding into ample and majestic proportions. We wish we had good grounds for exclaiming—

"O fortunati quorum jam mœnia surgunt!"

But we have misgivings, and the sight of this building fills us with gloomy imaginings. At one moment we are apprehensive that it will turn out a whited sepulchre: full of dead men's bones we know it to be; and it will assuredly be full of all uncleanness, unless the *twenty-two* wash themselves most diligently from their manifold iniquities.

At another time the structure presents to our eyes the aspect of a fortification; we fear that the *twenty-two* have resolved on not doing the "spontaneous;" that they have determined to show fight, and will, as a necessary consequence, incur annihilation. And is it possible that this monstrous chiro-surgical mollusk thinks it can resist the "pressure from without" by constructing for itself a new shell? If the Council believe that they can escape the scrutiny which is now shedding "intolerable day" into the dark and polluted recesses of our medical corporations, they must be the maddest of mankind; all Anticyra would not purge them of their delusion!

The College of Physicians have found it necessary to adopt the "spontaneous;" but if the College of Physicians have been bad, the College of Surgeons is a thousand times worse.

The former institution has indeed exhibited a melancholy picture of supine ignorance and laziness, of monkish bigotry, and of stolid illiberality; they have however stopped short of crime; they have insulted many, but they have defrauded none, and oppressed few. The College of Surgeons on the other hand have so far outstepped the ordinary limits of corporate iniquity as to have become absolutely felonious.

1. Enormous sums of money paid by the members have been appropriated by the *twenty-two* to "the purposes of the institution;" that is to their own purposes—seeing that they are themselves the only persons who have any control over, or derive any benefit from the said institution.

Further, they for many years secreted the library, which is the property of the *College*, not of the *Council*, and it is our firm belief that they would have secreted it to this day, had they not been compelled to throw it open to the members, by the vigorous attacks of the *Lancet*—the admirable *Lancet*, to which the profession in this country owe an everlasting debt of gratitude.

All this may be called by various soft names. "Call it *conveying*, Hal." Now we will tell the *twenty-two* what we call *stealing*—it is taking possession of other peoples' property without their consent: verily the *twenty-two* have laboured well in their vocation!

2. The Hunterian Museum was given in trust to the *College* for the benefit of the profession and the public. The *twenty-two* have kindly taken all the responsibility on themselves, and have also taken good care to render the museum useless or nearly so to every-body else. Is this breach of trust?

3. They have so framed their own regulations with respect to surgical education, as to restrict the business of teaching to themselves, or those few whom they deign to favour; and they have so influenced the regulations of the great public charities, that nobody

but themselves, and those few whose interests chime in with theirs, are eligible to the situation of surgeon to these charities. Is this conspiracy?

Such are a few of the enormities perpetrated by the *twenty-two*. If their "Transactions" were published, we know of no work that could keep them in countenance but the Newgate Calendar!

But these things must and will have an end. If the delinquents will not yield to reason, they must be dragged to retribution; and what common sense and common decency cannot elicit, the iron hand of public justice will wrest from them. The Council will be taught that in a free country two-and-twenty men are not to lord it despotically over nearly as many thousands; and that if the London College of Surgeons is to continue to exist, the members must have a voice in its proceedings. The plea upon which they have hitherto been excluded is, perhaps, the most impudent piece of sophistry with which oppression ever insulted its victims. The great mass of the members are, it appears, ineligible to the Council, because they practise pharmacy—and it would be most degrading to the Council to have a tradesman in it. Heaven help the infatuated men! the *twenty-two* are themselves tradesmen of the most sordid and disreputable description—dealers in parchment scrolls for which they charge two-and-twenty pounds, well knowing in their hearts that they are not worth a *sous*, and laughing in their sleeves at the flats whom they have *queered*.

If the Council had from the first declared individuals who practise pharmacy ineligible as members of the *College*, they might have done some service to the public, by discountenancing the absurd and pernicious union of a profession and a trade; but a man being once admitted a member, and allowed to continue such, it is no matter whether he is a surgeon and apo-

thecary, or a surgeon and fishmonger; he is *a member of that College*, and has an unquestionable right to a voice in all its proceedings, to a participation in all its privileges and immunities, and a free eligibility to all its offices of honour or emolument. We repeat, that if the College had from the first determined that no individual practising as an apothecary should be admitted as a member at all, such a restriction might possibly have acted beneficially, by preventing medical men from engaging in trade: but mark! the exclusion of apothecaries from the College would have kept the *coffers* empty—a very ugly feature in the statistics of a corporation. If the apothecaries were redolent of jalap, their money was not, and the twenty-two found it a very snug arrangement that others should *pay*, and that they should legislate. If the Council eschewed the trade of the apothecary, why did they not exert themselves to obtain for the members engaged in general practice some more honourable mode of remuneration than the vending of drugs, instead of conniving, as it is well known they did, at the despicable manoeuvres of the *Rhubarbarians* to perpetuate a system so degrading to the profession? Let them answer this if they can, and if not, let them prepare either voluntarily to acknowledge their guilt and amend their ways, or to maintain a hopeless contest against public opinion, and finally to sink under the stern fiat of equal legislation, which has too long slumbered, but is now awake.

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In a letter signed "Paterfamilias" in our last number, the plan of contracting for medical attendance is advocated as preferable to any other mode of remunerating medical men. This plan no doubt has its advantages, and may be conveniently adopted in a few instances. As a general arrangement, however, we think it altogether inapplicable.

The following are some of the evils that would attend it. First, it would too often happen that the doctor would never see his money. Secondly, though the non-medical party might be very well content with the arrangement, when there had been much illness in the house, he would pay the stipend grudgingly when all the family had kept remarkably well for the past year, and it is ten to one would propose an abrogation of the contract for the ensuing year. Thirdly, many people are so unreasonable that the contracting Doctor would be sent for everlastingly, on every frivolous occasion, and would find half his time occupied by a single family. Lastly, the population of large towns is so fluctuating as to render such an arrangement impracticable with reference to the greater part of the community.

We shall probably return to this subject again, but in the meanwhile must repeat our conviction that a legalized system of fees would be the only certain source of just remuneration to the medical practitioner.

Though we do not quite agree with our intelligent correspondent, we shall always be extremely happy to hear from him, and other non-professional friends on such subjects. On all points involving the relations of the profession to the public, the opinions of medical men may often be advantageously modified by those of individuals unconnected with medicine; since every *class* of men have a disposition to view things through some partial medium, which on that very account cannot be the true one.

We are happy to find by the recorded proceedings of a second meeting of the medical gentlemen of Liverpool, that the object of their former assemblage—the establishment of a medical institution—is likely to be attained without any compromise with the grasping

shareholders of the Royal Institution of that town. This is as it should be, and we doubt not that the community at large will cheerfully give their money, and pay respect to the members of the intended association on their present independent ground. We find that our meek friend—the Moses or Melancthon—of the former meeting, attempted to raise objections to the proposed arrangement;—*iterum Crispinus!*

We refer our readers to the account of the second meeting, in our number of this week.

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Hospital Reports.

LONDON UNIVERSITY HOSPITAL.

Case of Erysipelas, with Clinical Remarks, by Mr. Cooper.

MARY PETIT, aged 58, had suffered for some time with an ulcer on the inner angle of the right leg; there was swelling of the foot for some days before she came to the Hospital, and erysipelas had taken place from the foot to the knee when she was admitted; about five weeks ago there was great swelling of the leg, and the knee had a deep red tinge, with two or three dark points in it, indicating that gangrenous suppuration had commenced.

Her skin was dry, pulse quick, secretions diminished, the intellectual faculties quite clear; this was a favourable symptom, for when you find delirium attending erysipelas, the prognosis is unfavourable.

Immediately on her entering, three or four free incisions were made into the fascia through the integuments; there was a considerable discharge of matter, with profuse bleeding.

You make incisions in this stage for two purposes—to let out the matter, and to produce bleeding—these are both attended with benefit. You need not make your incisions more than two and a half, or three inches in length; you will find them quite large enough for the discharge of the matter, and there is less danger than in making them longer; for generally, where incisions are made the whole length of the leg, there is great loss of blood, which is attended with danger, particularly if the patient, like ours, be an old one; there are several cases on record where this practice had been followed, and the results were fatal; you will therefore bear this fact in mind; but, should you in any case find the bleeding too

profuse, your plan will be to tie the vessel, keep the limb elevated, and apply cold.

In our case the incisions were attended with great benefit, for even in twenty-four hours the swelling had considerably decreased; the pulse however was still jerking and ninety-six, the cause of this was, that all the mischief was not removed, there was still a great mass of cellular substance under the skin, keeping up excitement; it is often some days before you can remove this; when it does come away it is generally in pieces of six or eight inches in length. Mr. Chandler found in this case that half a pound came away in one day. When there is suppuration in phlegmonous erysipelas, there is death of the sub-cutaneous cellular membrane; you do not have circumscribed abscess, but diffused suppuration. The leg is much more liable to slough than the arm in erysipelas; the explanation for this given by Duputyren is, that all the great arteries of the leg are situated deep and remote from the skin, the integuments sloughing from want of nutrition. I have long been of this opinion.

We were apprehensive in this case of sloughing of the skin, and had the incisions been delayed a short time longer, there is no doubt, as there was already a few sloughing spots, that it would have become general. Our treatment of this case was at first antiphlogistic, but in four or five days, as there was great exhaustion we gave her stimulants, such as the spirits of ammonia and lavender; we were soon able to discontinue these and to give her wine and quinine in small quantities daily. She is now convalescent. In erysipelas your treatment should always be speedy, if your incisions are delayed the case will prove fatal. If the skin is dead, and you open it, the constitutional irritation will be so great the patient will die, even though young and of a strong constitution. Had this case have come in earlier I should have applied cold to the whole limb. In phlegmonous erysipelas in its early stage, if you wrap the leg up in a cold sedative application, from the ankle to the top of the thigh, it will often prevent effusion into the cellular tissue; but if four or five days have elapsed, and effusion has taken place, make incisions—small ones will do early—but if the case is gone very far they must be larger, in order for the slough to come out. In the early stage of erysipelas also leeches may be applied before the cold; they are frequently of great service, as is also bleeding. Duputyren thought bleeding should be practised before the application of the leeches; this idea is founded on a doctrine not generally followed in this country, that leeches increase the blood in any part to which they are applied, should there be a great quantity in the system. Antimonial medicines, I should mention, are also of use, and I have seen an emetic of infinite service in the early stage of phlegmonous erysipelas.

WESTMINSTER HOSPITAL.

Suicidal Mania—Wounds of the Neck.

GEORGE RICHARDS, aged 30, was admitted February 13th, into the hospital, under the care of Mr. W. B. Lynn.

The patient has a wound of tremendous length in the neck, extending across its summit nearly from one mastoid process to the other, which he this morning inflicted in a paroxysm of suicidal mania. It appears that he has witnessed severe reverses in life, having at one period been a tradesman in respectable circumstances, but that he failed. He possesses a strong frame, and is of a phlethoric habit, and has a wild maniacal expression of countenance. Upon being questioned as to the motives which induced him to commit so rash an act, he replied, that he was seized with a strong impulse, for which he could ascribe no reasons. Upon his admission it was, however, found by the house-surgeon, that the wound was very superficial, not extending much below the skin, and that neither the larynx, trachea, nor any important vessel was in the least degree injured.

The plan of treatment adopted, has been to keep the edges of the wound together by means of simple dressing of adhesive plaister, &c., and a roller applied to the head and chest, in such a manner, as to keep the chin down upon the breast; the head and neck at the same time, being supported by means of pillows, &c. Purgative and diaphoretic remedies have been ordered with the view of keeping down any febrile action that might arise.

23rd.—For the first three or four days after the last report, the patient appeared to be going on very well, but since that period symptoms of cerebral excitement have appeared, which have led to just apprehensions regarding the termination of the case.

On the 20th he was cupped on the temples and eight ounces of blood were removed, and yesterday two blisters were applied in the same situation. Upon removing the blisters this morning it was found, that a rather extensive erythema of the scalp had been excited by their application, which extended over the temples and auricles, and involved also the margins of the wound, which had rapidly advanced towards complete union.

At the present time the countenance is extremely wild and unsettled; the pupils are highly dilated; the mind highly agitated, and evidently labouring under a low form of delirium, very similar to the delirium tremens of drunkards. The pulse is 120, and feeble: the tongue covered with a whitish fur at its circumference, but dry, brown, and fissured in the centre. Teeth covered with an offensive sordes. The gums glazed and dry. The bowels are somewhat relaxed. The inflamed surface has been directed to be dressed with

flour, and he is ordered to take the following pills immediately :

R_x. Calomel gr. viij;
Pulv. antimonial gr. v;
Extract hyoscyami q. s. ft. pil ij, statim
sumendæ.

24th.—It now turns out from the statement of his friends, that he has been a great and habitual drunkard, being in the habit of taking free potations of a mixture of rum and porter. He is evidently worse since yesterday's report. The eyes are suffused with tears, and the vessels of the conjunctiva in a high state of engorgement. The pulse is 140, feeble and tremulous. The tongue more highly furred, and participating in the trembling condition of the features. The wildest delirium is constantly present. Mr. Lynn has ordered him to take the following pills.

R_x. Opii pulv. gr. i;
Pulv. capsici, gr. vj;
Confect. rosæ, q. s. M. ft. pilul
ij, statim sumendæ.

Should the pills be rejected, he has ordered some other form of opiate to be tried. He has also been taking the following mixture, prescribed by the house-surgeon :

R_x. Confect. aromat. 3j;
Ammonia carbon, 3ij;
Misturæ camphoræ, 3 viij. M.
Capt cochlearia duo quartis
horis.

26th.—The delirium grew gradually worse throughout yesterday, and he died this morning at half-past one o'clock.

With the exception of a half dram dose of liquor opii sedativus, and a free allowance of brandy and beef tea, no other remedies were employed.

27th.—Inspection of the body, thirty-six hours after death. Considerable effusion of a sero-sanguinolent quality, was met with in the sub-fascial cellular tissue of the scalp. The sinuses of the dura mater were not thought to be more turgid than is ordinary. There were no traces of hyperæmia in the arachnoid, nor of any of the changes usually consecutive to inflammation. The cephalospinal fluid of Majendie, did not appear to be increased in quantity. The veins of the pia mater were rather more distended, perhaps, than is quite normal, and less doubtful traces of hyperæmia existed in some of the capillary arteries of that membrane. There was not more than a dram of fluid in the ventricles of the brain ; but about half an ounce was met with in the arachnoid sac, at the base of the brain. The substance of the nervous tissue of the cerebrum, cerebellum, and other structures of the encephalon, both as respects its vascularity, consistence, and all other characters, was perfectly healthy.

In the thorax, the heart and lungs, so far as examined, which, however, was not minutely, were found healthy, with the exception of some recent adhesions of the pleura of the right side ; and a rather extensive accu-

mulation of fat about the heart and pericardium.

In dividing the integuments of the abdomen, a very thick stratum of subcutaneous fat was exhibited. The liver was of its natural size, but of a rather paler hue, and more dense texture than ordinary.

The gall bladder was distended with healthy looking bile. The stomach and intestines were distended with gas ; the mucous membrane of the former was somewhat softened and discoloured, and in a few circumscribed spots, presented the puncturated form of redness, more particularly at its lesser curvature. The spleen was extensively and firmly adherent by its peritoneal surface to the opposed surface of the diaphragm ; it was found to be extensively hypertrophied, being about three times the natural size ; its tissue was extremely soft and flabby, being readily broken down by pressure into a substance resembling grumous blood. One of the kidneys which was examined, appeared perfectly healthy.

Chronic Ecthyma.

(Case of Timothy Holland, continued from page 700, Vol. 6.)

Dec. 24th.—He has used the ointment of peroxide of mercury, as directed by Mr. Guthrie, but it proved so highly irritating, that it is found necessary to reduce its strength by one half, and it still produces so much pain that Mr. Guthrie ordered it to be discontinued, and poultices are returned to, with an occasional warm bath at night.

1835, Jan. 2nd.—The sores are gradually healing, and filling up with healthy granulations, some of which are however somewhat too luxuriant. Many of these sores have advanced considerably towards complete cicatrization ; which process has almost uniformly commenced in the centre of the sores, and increasing towards the circumference, has exhibited insular shaped patches nearly covering the sore before uniting with its margin, from which it is separated by annular-shaped fossæ of the granulating ulcer. He merely takes the diaphoretic mixture, and has the sores dressed with simple cerate, and covered with oil-silk. A spot or two of irregular and imperfect phlyzaceous pustules have made their appearance on the scalp.

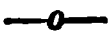
19th.—The ulcers on the legs have now completely healed, but his face and head have become plentifully covered with the same eruption in smaller and more irregular shaped patches, which have now began to assume the form of grey crusts.

28th.—He complains of severe pains in the head and face, from the eruption, which increases rather than diminishes. The legs and trunk remain quite free. He takes nothing but the diaphoretic mixture, and uses the baths at night.

31st.—Mr. Guthrie ordered him to com-

Murder of a Surgeon by his Patient.

M. PRESTAT, practising at Caylux, had trepanned a patient whose cranium had been fractured a few days before by a blow; a state of mania, which no one, and least of all his unfortunate victim, had perceived, seized the patient, who, having obtained a knife from his imprudent nurse, wounded M. Prestat, when he was at the side of his bed and had his arms raised towards the patient's head to take away the bandages. A wound six inches long was inflicted, extending along the linea alba from the xyphoid cartilage down to the navel: the depth was the same as the length of the knife blade. Every one of the abdominal viscera were more or less wounded. The peritoneum, the mesocolon and its artery, were cut through. The epigastric and mesenteric arteries were also laid open. The unfortunate gentleman lingered eight hours and died, surrounded by his friends. The abdomen was found to be filled with blood. —*Gaz. des Hôspitaux*, Feb. 28.



Early application of Galvanism to Medicine.

THE following grotesque prescription occurs in Scribonius Largus. (De Comp. Medicament, c. 1).
"Pain in the head, however inveterate and intolerable, is immediately removed and permanently cured by the application of a live black torpedo to the part, till the pain ceases and the part is benumbed: when this is perceived to be the case, the application must be discontinued, lest the sensation of the part should be lost. Several torpedos of this kind should be had in readiness, because torpor, which indicates the success of the remedy, sometimes does not occur till two or three fish have been used."

The author recommends the application of these potent fish to the feet in gout. Op. Cit. c. 41. These are curious instances of the employment of galvanism in medicine, long before the existence of that great agent was recognised in science.



BOOK.

The Nature of Cholera Investigated. By John George Finch, M.R. C.S. 8vo. pp. 54: London, 1825. J. and F. Rivington.



CORRESPONDENTS.

- Celcus*—Mr. Wilson's, paper on water-dressings, and the notice of Finch on Cholera, in our next.
- A Student at the Westminster Hospital*—We decline publishing both communications.
- Mr. Langdon*—There are such lectures delivered in summer, and duly recognized by the Royal College of Surgeons and Apothecaries' Hall.
- A Reformer in the College of Physicians*—The College of Physicians only adopt our recommendation in throwing the "Rhabarbarians" overboard. The Medical Reform Bill will be introduced by Mr. Warburton, as soon as the great political drama now being performed is over. In the meantime, the College is reforming itself, in order to save Mr. Warburton the trouble of exposing its illegal and unjust bye-laws.
- Reform in the College of Surgeons*—We understand that the College of Surgeons has determined, so soon as this magnificent Institution is completed, to throw open its splendid library from 10 o'clock in the morning until 10 at night, to the members of the profession at large.

WEEKLY METEOROLOGICAL JOURNAL.

1836.	Moon.	Thermom.			Barometer.		De Luc's Hygrometer		Winds.		Atmospheric Variations.		
Mar.													
5		37	52	42	29.71	29.62	53	55	W.	S.S.W.	Fine	Fine	Rain
6		44	50	41	29.13	29.45	55	54	S.W.	W.	—	—	Fine
7	☾	43	49	35	28.85	28.88	54	51	S.S.W.	W.S.W.	—	Rain	—
8		41	45	40	29.06	29.45	51	56	W.	W.S.W.	—	Fine	Cloudy
9		44	48	35	29.17	28.85	56	55	S.S.W.	S.W.	Cloudy	—	Fine
10		36	50	36	29.21	29.51	55	60	W.S.W.	S.W.	Fine	—	—
11		49	52	43	29.31	29.51	60	62	S.S.W.	S.S.W.	Cloudy	Rain	—

50, High Holborn.

WILLIAM HARRIS and Co.

Advertisements should be forwarded before the afternoon of Thursday; all books for review on Wednesday; and all communications on Monday, if intended to appear in the ensuing number.

THE

London Medical and Surgical Journal.

No. 164.

SATURDAY, MARCH 21, 1835.

VOL. VII.

LECTURES

ON THE

INSTITUTIONS OF MEDICINE,

DELIVERED BY JOHN FLETCHER, M.D., F.R.C.S.E., AT THE ARGYLE SQUARE SCHOOL OF
MEDICINE, EDINBURGH; SESSION 1834-35.

LECTURE XV.

Arguments Disproving the existence of a Vital Principle, continued—Inadequacy of such Principle to explain the Phenomena of Life.

BUT is not, it may be asked, design, such as can be attributed only to some such vital principle within them, manifested in the heaving and falling of the chest, the contractions of the heart, and the other sensible motions of various parts, as subservient to the several functions of organized beings; and still more in the various molecular actions, whereby, with undeviating accuracy, every particle of every part of the machine is removed and deposited precisely at the time, and in the quantity that is required, not only originally to form these several parts—the eye or ear, for example, those finished examples of exquisitely adapted workmanship—but subsequently to maintain each in a state of integrity, ever varying yet ever the same? Undoubtedly—Design, deep and wonderful: but it is that of the Great First Cause of all things, who has adapted, in every case, the physical causes—the immediate means—to the end to be fulfilled; not that of this miserable means, which acts, and can act only in blind obedience to the laws imposed upon it (a). Nor perhaps are the evidences of design really greater in the motions, sensible or insensible, of the organic, than of the inorganic kingdom of Nature. The revolutions of the planets—the alternations of the seasons, and of day and night—at one time the ascent of the waters into the atmosphere, at another its descent in rain or snow—the motions of the sea, the rivers and the springs—the occasional changes on the surface of the earth itself—all manifest an all-wise and omnipotent design; nor are the molecular actions here also—the aggregation of a crystal or a stalactite, for example, or the feathery condensation of a vapour—less indicative of an end in view in their operation, or of consummate skill in regulating and adapting them. In the latter class of cases, however, we unhesitatingly admit that the design is, not that of the means—of the mere so-called forces of attraction and repulsion—but that of the Great Author of those forces; and why should we doubt that the same is the case in the former also (b)? Nor are even the means employed perhaps less intricate and complicated in the one instance than in the other. When we speak of attraction and repulsion indeed, we seem to be speaking of simple forces, producing certain actions, but we are in fact speaking of the actions themselves—those of attracting and of repelling—the forces being in both cases quite distinct from these actions, and consisting of a property of

(a) "To ascribe," says Dr. Prichard, "to the vital principle such properties, is to invest it, not only with reason and intelligence, but with the wisdom and power of an omniscient Creator, who, if He works by second causes, cannot be conceived to endow them with his proper attributes. Such language is an abuse of words, and contrary to every maxim of philosophy."—(On the Vital

Principle, 1829, p. 123.)

(b) "The whole of the phenomena of matter, whether it be organized or not, are the result of the law of matter, the mere consequents of events immediately antecedent, and have not the least connection with a previous purpose or mental judgment in the beings or things in which they are displayed."—(Useful Knowledge, 1831.)

being attracted or repelled on the one hand, and a power of attracting or repelling on the other: and what more do we contend for with respect to life, than that it is, not a substantial principle operating as a simple force, but a series of actions, resulting from the property of irritability or vitality operated upon by appropriate powers (a)? There is nothing then in reality more singular in the actions of organized beings than in those of inorganic matters, nothing more indicative of design—nothing more obscure—nothing which stands more in need of a substantial principle, or resident entity, to account for it. We may indeed, if we please, in conformity with the views of many philosophers, not only ancient but modern, call these actions of inorganic matters, chemical and mechanical, their life; but then, to be consistent, we must either allow, as the ancients did, a vital principle to inorganic matters in common with organized beings, or we must refuse to the latter a principle of which the former are almost universally regarded in the present day as destitute. It is not contended that we understand the nature of any of these actions—it is not contended that we advance one step towards explaining them by ascribing them to the agents in question: but it is contended that we understand the nature of vital, as well as of either chemical or mechanical action; and that if we are satisfied to attribute the two latter to the agents above specified, as is almost universally done, we cannot, without great inconsistency, refuse to ascribe the former, which are in every respect so analogous to them, to similar agents, instead of to an imaginary substantial principle, of the operation of which there is no more proof or probability in the one case than in the other. Of the immediate nature of physical causes in general we know absolutely nothing, since we are capable of recognizing their existence only by their effects. We know not how or why a certain aggregation of matter, called phosphorus, should be capable, when exposed to certain substances, under favourable circumstances, of exhibiting the phenomena of combustion, or a certain other aggregation of matter, called ivory, should be capable, when struck by a hard substance, of displaying those of sensible motion; but we know that they do so, and we satisfy ourselves, in these instances, with stating that the phosphorus is, *qua* phosphorus, combustible, and the ivory, *qua* ivory, elastic, without ascribing to them any substantial principle of combustion or sensible motion. In like manner we know not how or why a certain aggregation of matter, called organized, should be capable, when acted on by certain appropriate powers, of manifesting the phenomena of life; but we know that it does so—that the more perfect is the organism, the more remarkable are these phenomena, and that any change in the former produces a corresponding change in the latter—and what other proof can we require or possess that organized matter is *qua* organized, irritable or endowed with vitality, and that it is not upon any substantial principle of life that these phenomena depend?

But admitting, it may be said, that quite the lower tribes of organized beings do not display any actions which may not be explained away without conceding to them a substantial vital principle, it is impossible so to dispose of some of the more exalted actions of the higher—actions which are surely in no respect analogous to such as are merely chemical or mechanical. If, however, this sovereign principle can be dispensed with even in those chaotic tribes, from which each kingdom of organized Nature takes its rise—and to which, since they are often with difficulty distinguished, either by their structure or their actions, from mineral substances, it can hardly be considered necessary, even by the most determined substantialist—it will be difficult, if not impossible, to say at what point afterwards, in either of the ascending scales, it can be abruptly introduced; for so insidious are the steps by which we ascend from them to the very highest tribes of organized beings, and so slightly superior the actions of each tribe, as we proceed, to those of the one immediately below it, that we are almost compelled to grant that what was unnecessary to the one can hardly be necessary to the other, and that consequently what we denied to the Fungus and Polype must be denied equally to Man. And with respect to the more exalted actions of the higher tribes of organized beings, such as sensation and thought, these have manifestly no immediate connexion with the existence of a vital principle; since, while on the one hand they are certainly not a necessary consequence of its presumed presence, so on the other they may be easily supposed capable, where they are manifested, of doing without it. Many races of organized beings exhibit no traces whatever of these

(a) Magendie says it is “une étrange erreur” to compare vital action to attraction, because, while the laws of attraction are well known, those of vital action lie totally concealed. But the latter part of the proposition is not quite true; nor would it furnish a fair objection to the comparison, even if it were. The conditions of attraction do not more certainly exist at present than they did before Newton discovered the laws which

these conditions obey, nor do those of vital action less certainly exist at present than they will do when the laws which they obey shall have been fully ascertained. The assumed analogy is between the general conditions of the two, as constituting respectively the proper actions of different forms of matter; not between the specific laws which they severally obey.

actions; and are still alive, and even in those tribes which habitually exercise them, they are always periodically to a greater or less degree suspended, as during sleep, and sometimes totally cease for an almost unlimited time, as in comatose diseases, without prejudice to the life of the being; so that, whatever substantial principle or principles we may find it convenient to introduce in order to explain these more exalted actions, it is obvious that they cannot be identical with the one called life, and that it is not they which

“——— *agitant molem, et magno se corpore miscent.*”

Nor would the admission of one or even of two such additional principles, under the names of sensitive and rational, in any degree imply the existence of that called vital, as the main agent of those baser actions in which alone life, properly so called, consists. On the other hand, many of the arguments tending to disprove the existence of a vital principle serve to render it probable, *a priori*, that that of either of the others is also imaginary; and that, as one specific property, namely irritability or vitality, which is common to organized matter in general, qualifies it, when subjected to appropriate stimuli, to manifest those ruder and less elevated actions which constitute life, so other specific properties peculiar perhaps to certain forms only of such matter may qualify them, when properly acted upon, to display those more delicate and dignified actions in which sensation and thought respectively consist. But into this department of the discussion it is unnecessary and inexpedient to enter at present.

III.—The third head of evidence commonly adduced in favour of the existence of a substantial vital principle, is founded on the presumed incompatibility of the opposite doctrine with a belief in the immortality of the soul. There is in the minds of many persons, not only among the uninformed, but also among the educated, a vague, indefinite kind of impression, that the vital principle, the sensitive principle, the rational principle, and the immortal principle, are all identical; and that he who denies the substantiality of the first, does the same with respect to all the rest. This impression appears to have originated in the ancient complicated absurdity of applying to the three supposed substantial principles of life, of sensation, and of thought, and to the one real principle of immortality, the same name, as soul, spirit, and so forth (*a*); an absurdity which, regulating, as it has done, as well our most philosophical, as our most familiar expressions on these subjects, has not only always influenced, to an incredible extent, the ideas of the vulgar, high as well as low, upon these matters, but introduced into the best parts of the writings of even the

(*a*) An attempt was, indeed, made at a semi-distinction, by Plato, who, while he confounded together the vital, sensitive, and immortal principles under the general name of *ψυχη*, still subdivided this into the *θεωρητικη*, or simply vital, and the *αισθητικη*, or sensitive and immortal, and, at the same time, admitted a distinct rational principle under the name of *Νους* or *Φηνη*; and a similar distinction was affected by the Romans, who, while they called the vital and sensitive principles, collectively, *anima*, distinguished the rational by the name of *animus* or *mens*. Thus Juvenal—

“*Indulsit communis Conditor illis
Tantum animus, nobis animum quoque,*” &c.

Galen again tried an arrangement somewhat different, splitting, as before remarked, the vital *Πνεύματα* into two classes, under the names of proper vital and natural, while he packed, on the contrary, the sensitive and rational together, under the name of animal. None of these proposed distinctions, however, were ever steadily maintained; and, indeed, it was impossible that they should be, thus discordant and irreconcilable as they were. Dr. Barclay, indeed, coolly argues that they were all unfounded; and that the four substances in question, real and supposed, are, in fact, all the same. The immortal principle he every where identi-

fies with the rational, as being responsible for its backslidings; and the rational again must be identical, he infers, on the one hand with the sensitive, and on the other with the vital, for “What,” says he, “can it will or think without feeling, and how can sensation subsist without life?”—(On Life and Organization, 1822, p. 495). Upon such principles as these we might undertake to prove on the one hand that a surety is identical with the man for whom he is bound, and on the other, that the second story of a tenement is identical with the first, and the third with the second, because they cannot respectively subsist independently of each other. Mr. Abernethy had, some time before, contended against confounding perception and intelligence with mere vitality (On Mr. Hunter’s Theory of Life, 1814); and Dr. Pritchard rationally concludes that, at least, the vital principle and the sentient, cogitative, and immortal principle—all which he unfortunately regards as one and the same—“supposing, for a moment, that both really exist, are entirely distinct in their nature and attributes.” (On the Vital Principle, 1829). To a similar effect says Dr. Alison—“Whatever notion we may entertain respecting the existence of a vital principle, it has no connection with our notion respecting the existence of mind, &c.” (Outlines of Physiology, 1831, p. 3.)

greatest philosophers upon the subject of life, so much error and confusion, that we are frequently compelled, while perusing them, to dissent from one-half of those propositions in the remainder of which we most cordially coincide, and close their works in general chagrined and disappointed that what, but for this fatal amalgamation, might have been rendered so clear and perspicuous, should have been presented to us only "through a glass darkly." Upon this subject in general, however, it is sufficient to observe at present, that no arguments adduced against the presumption of the existence of a vital principle—although, in as far as any arguments can establish a negative proposition, apparently conclusive—bear at all, otherwise than analogically, against that of the existence of either a sensitive or rational principle; nor do any arguments adduced against the doctrine which teaches that these exist—strong though they be—tend to shake in the slightest degree, either analogically or otherwise, our faith in, our conviction of, that of the principle of immortality. That the soul is something entirely independent of either a sensitive or rational principle, will be as far as possible demonstrated in future; and that it is independent also of a vital principle must, in the mean time, be obvious to any one who considers for a moment that this latter principle is ascribed indiscriminately to every organized being—a dog, a bird, a reptile, a fish, an insect, a worm, a zoophyte, the lowest fungus—while a soul is imputed to man alone. The differences in the vital phenomena displayed by the most abject tribes of organized beings and by man are only in degree, in this respect *Faba est cognata Pythagoræ*, the principle which we concede to the latter as the cause of these phenomena, must be conceded equally to the former, and if in the one case this principle—

"Redit in nihil quod fuit ante nihil,"

it must do so in the other also; so that to connect Man's hopes of immortality with the admission of a vital principle within him, is so far from favourable, that it is directly opposed to all the best persuasions of religion, natural as well as revealed. But the hopes and expectations of man are founded, or should be founded on a basis infinitely more sure than the supposed existence within him of any such principle—on a basis proper to him, not common to him and the vilest worm or weed—on the suggestions of his reason, and on the strength of his faith; and as so long as these actuate him, every other evidence of the existence of a soul must be superfluous, so, were these once withdrawn, every other evidence must be nugatory.

So much, then, for the alleged testimony in favour of the *existence* of a substantial vital principle. The next subject of inquiry, had this been established, would have been how far it might be regarded as adequate to effect all that has been ascribed to it; but into this question, after the express and unqualified denial of its existence above conveyed, it seems quite superfluous to enter. A successful hypothesis has been compared to a key which fits and opens a lock; but when no part of the structure or motions of a lock are such as to warrant a presumption that there ever was a key, such as has been supposed, made to open it, or that it wants any such key, it seems idle to inquire whether such a key might not be competent, if found, to answer the purpose—we should rather proceed at once to open the lock by such means as its construction and mechanism seem to require, and we have immediately at our command. It may be shortly observed, however, with reference to this question, that it is utterly impossible to conceive any single principle or agent capable of affecting *per se* all, or a thousandth part of what has been imputed to this mysterious offspring, at once of imbecility and boldness, of helplessness and daring—to resist chemical agency—to keep in constant motion the respiratory muscles and heart, as well as to excite all the other muscles of the body, as occasion may require—to generate animal heat and cold—to effect every where the continual absorption and deposition of all kinds of different matters—to digest and assimilate the aliment—to organize the newly-formed germ—to repair wounds, and repel and counteract diseases—as well as to effect innumerable other processes which must require, collectively, not only numerous modifications of any common property, such as we may presume to belong to organized beings, but numerous distinct powers to act on this property thus modified; and which must be attributed, therefore, not to any one self-sufficient substance, however active and however intelligent, but to countless irrational and unconscious forces incessantly at work in every point of the body, in blind but implicit obedience to laws imposed upon them by the Supreme Being, and adopted every where to the end to be fulfilled (a).

(a) It is excellently remarked by Dr. Prichard, "The hypothesis of a vital principle is a weapon, ready to cut any knot, but capable of untying none." (On the Vital Principle, 1829. p. 128.)

LECTURES

ON THE

PHYSICAL EDUCATION AND DISEASES OF INFANTS,

FROM BIRTH TO PUBERTY,

BY DR. RYAN,

Delivered at the Medical School, Westminster Dispensary, Gerrard Street, Soho;

Session 1834-35.

LECTURE XXX.

Congenital Displacement of Organs—Deformities of the Head, Neck (Wry-neck, Stoop)—Superior Extremities, Elbow, Wrist and Fingers—Sternum or Breast-bone (Pigeon or Chicken-breast); of the Inferior Extremities of the Hip, Knee, Ankle, and Feet—Vari, Valgi, and Pes Equinus (Club-feet).

Congenital Displacement of Organs.

GENTLEMEN—The head and soft parts, or organs of the body, may be displaced at the birth of the infant. Every one of the bones may be displaced. The infant may be born with one shoulder higher than the other, in consequence of spinal deformity, with one upper or lower extremity longer than the other, with the head and neck to one side, with the feet turned inwards (vari), or outwards (valgi), claudication or club-feet. The hand or arm may be distorted like the lower limb; or the knee or knees may approximate too closely. Moreover, there may be dislocations or fractures of all the bones. In fine, there may be strabismus or squinting of one or both eyes, and all the soft organs may be displaced or transposed.

Unequal elevation of the Shoulders.—When one shoulder is higher than the other, there is some spinal deformity. Happily for humanity very great attention has been paid of late to spinal deformity; more especially in the orthopedic establishments of continental Europe, and in this country by many eminent and successful practitioners: among whom are Mr. Pott, Mr. Wilson, Dr. Harrison, Sir B. Brodie, Dr. Jarrold, Mr. Ward, Mr. Copeland, Mr. Shaw, Dr. Dod, Mr. Beale, Mr. Stafford, &c. &c. It is unfortunate that a great diversity of opinion as to the cause and treatment of spinal curvature exists amongst these authors; some strenuously recommending the recumbent position, others opposing it; more advising traction after the manner of Ambrose Paré. Dr. Harrison is the strongest advocate of the last practice; and, it is but justice to declare, that his method has succeeded when all others have failed. He has adduced the results of several cases in his work on Spinal Diseases, which were favourable, after some of our ablest surgeons had declared the cases to be hopeless. He has adduced several successful cases, which were declared hopeless, in a paper addressed to Sir B. C. Brodie,

published in Dr. Ryan's London Medical and Surgical Journ. vol. 6, 1835.

The vast importance of spinal diseases, is my apology to the reader for this long digression. If it be a practical man, he will at once receive it. If he be not, future experience will convince him of its value. If he will take the trouble to analyze the immense number of head, chest, and abdominal derangements that daily present themselves to those engaged in extensive practice, which are most absurdly and called nervous, hysterical, or hypochondriacal disorders, but which, in reality, depend upon spinal irritation, incipient or established deformity in the vertebral column (or spine), he will at once admit the inestimable value of the preceding observations. If he be superficially informed in medical science, or a sceptic, I beg him to peruse the works whose titles are inserted at the bottom of this page*.

In hospital and dispensary practice we daily see a vast number of women, young and old, from the age of puberty to senescence, who suffer most calamitously from spinal irritation or deformity. There are, perhaps, no patients so numerous, so nervous, so hysterical, so hypochondriacal, or so unfit for performing domestic or social duties. There is scarcely a female of tender or ma-

* Andry, de l'Orthopedie; Le Vacher, Traite du Rakitis; Pott's Surgical Works; Petit, Sur les Maladies des Os; Portal, Obs. Sur la Rachitisme; Palleta, Exercitationes Chirurgicæ; Desbourdeaux, Nouv. Orthopedie; Scarpa, Memoria Sui Piedi Torti; Baynton and Copeland on the Spine; Wilson's Lectures on the Skeleton; Brodie on the Joints; Harrison on Spinal Diseases; Bell on Injuries of the Spine; Shaw on Distortions of the Spine; Jarrold on Curvatures of the Spine; Dods on Rotated or Contorted Spine; Ward on Distortions; Bamfield on Diseases of the Spine; Wenzel über die Krankheiten am Rückgrathe; Jörg über die Verkrümmungen; Pravez des Deviations de la Colonne Vertebrale; Delpech de l'Orthomorphie; Lafonde, sur les Principales Difformities; Cruvelhier Anat. Pathol. Encyclopedie Method. art Orthopedique; Dict. des Sciences Med. Dic. des Sc. Med.; Abregé Dict. de Med. et Chir. Pratiques, Dublin Hosp. Rep. vol. x; Beale on Deformities; Stafford on the Spine; Brown, Copeland, Barlow, &c. on Spinal Irritation. See a copious list of other writers in Cooper's Surgical Dictionary, in the French Dictionaries of Medicine already quoted; in the German Encyclopedia, Encyclopädisches Wörterbuch der Medicinischen Wissenschaften; and lastly, in the Cyclopædia of Practical Medicine now being published, as also in the American Cyclopædia of Practical Medicine and Surgery, 1815; Teall on Neuralgia; Tate on Hysteria, and a host on Spinal Irritation.

ture age in the middle and upper classes of society, who is not a sufferer from spinal irritation or deformity, with the innumerable disorders and derangements of all the functions of the body, of the brain and nervous system, of the circulation, respiration, digestive, muscular, secretory, and other functions (Teall, Addison, Tate, Beale, &c.) The cause of this will be explained hereafter, in the article of spinal and other deformities; but enough has been stated to convince you of the great importance of rectifying deformities of the head, shoulders, and limbs in infants, which depend, in most cases, on deformities of the spine. These we shall now describe.

To return, then, to the elevation of one shoulder more than the other, I have to state, that an infant born with this deformity has more or less spinal curvature, and runs the risk of being deformed for life, and of being a great sufferer from a thousand and one disorders, from painful sensations in every part of the body, head, chest, abdomen, and extremities, unless proper means be taken to correct his defects. The proper time for remedying all infantile deformities is during lactation or suckling, as the bones are unossified, and easily reduced to their proper position, and as the breast is the most powerful sedative or tranquilizer of the infant. The application of appropriate splints and bandages is indispensable. The various orthopedic means ought to be employed, the infant well nourished, and the most scrupulous attention bestowed on its physical education or management. Its diet, sleep, rest, exposure or exercise in the open air, cleanliness, &c., should be regulated according to the principles laid down in the preceding part of the lectures. It never should be thwarted or teased, however irritable or peevish, as its disease is the cause of its bad temper. Adults and parents, when the subjects of spinal irritation or deformity, however slight, are not, and cannot be the most even tempered. Neither can children, who are adults in miniature. It is essential to employ those amusements and exercises which would throw the unaffected side of the body into motion, as these would strengthen the muscles on that side, and tend to bring the spine and body into the erect position. Reposing on the affected side contributes to this result. Various gymnastic exercises are essential to the cure, and all means should be persevered in to the last. It has fallen under my observation, that many cases of deformed children, especially females, before the age of puberty (fourteen or sixteen years), in this climate, and even a year or two afterwards, were finally cured by persevering in the use of remedies. The same principles apply when one arm is longer than the other in consequence of the curvature of the spine; but not when this deformity is the result of embryonary or original malformation.

Obliquity of the Head and Neck.—This deformity cannot exist unless there be disordered action of the muscles of the neck, or deformity of its bones (cervical vertebræ). This distortion should be treated like the last, while the infant is at the breast, and as soon as possible. Splints, bandages, collars, and frictions on the opposite side of the neck, are the chief remedies. Stimulating liniments and embrocations are the best. When the infant begins to distinguish surrounding objects, its attention should be directed to the sound or unaffected side of the neck. The same principle may be acted on in applying it to the breast. Its cot or cradle ought to be so placed, that in viewing objects it may turn to the unaffected side, which will exercise the muscles on that side, and contribute to their strength, and its recovery.

Wry-Neck—Stoop.—There are other distortions of the cervical vertebræ, causing wry-neck and a stoop, which are to be treated upon the above principles. The causes of these deformities are, holding the head to one side, and the attitude of the infant, when always carried on one arm by the nurse, or lying constantly on one side in bed, burns, wounds, abscesses, &c. A properly-constructed instrument will extend the affected muscles; and when the disease is caused by the cicatrices or scars consequent to burns, the operation proposed by Mr. Earle ought to be adopted.

Malformation and shortening of the Upper Extremity—Arm, Elbow, Wrist, and Finger Joints.—This disease, which is seen occasionally, admits of no remedy. It is ascribed to an arrest of embryonary development, which as yet remains inexplicable. Deformities, distortions, or contractions of the joints of the superior extremity are very rare, unless in cases of rickets.

Contraction of the Elbow Joint—is sometimes caused in new-born infants by a morbid condition of the biceps muscle. The best remedies are extension by splints or other instruments, such as that proposed by Mr. Amesbury for stiff elbow joint, which has a screw which will overcome any muscular resistance, if used with proper caution, prudence, and perseverance. Shampooing, friction with iodine, and vapour baths, are also to be employed as auxiliaries. When the disease is caused by ankylosis or ossification of the joint, a cure can scarcely be expected; but even in this case I should use iodine and steady extension. I have known ankylosis of the ankle joint cured by this method in a case at St. John's Hospital, which was witnessed by my then colleagues, Dr. Negrie, Mr. Jenkins, and Mr. Nettlefold, and for which amputation was proposed at St. Bartholomew's Hospital.

Contractions of the Wrists and Fingers.—When these are congenital, they are remediable deformities; if of the ankle, foot, and toes, by splints and bandages. When they

are caused by the cicatrices or scars which follow burns, Mr. Earle has succeeded in curing them by excising the scars and applying splints. (*Medico-chir. Trans.*, vol. 7). The sooner the operation is performed the better. The late Baron Dupuytren related several successful cases.

Mechanics, labourers, washerwomen, and others, are subject to contraction of the ring and little fingers; and these are often removed by improving the general health and applying the antimonial ointment on the side of the neck over the origins of the brachial nerves.

Deformities of the Inferior Extremities.—The lower limbs are liable to various deformities: one extremity may be longer than the other, one shortened, wasted, and contracted: and in such cases there will be curvature of the spine in the infant, or spinal irritation in the adult, giving rise to facial and other neuralgia. The same disorders often supervene, when an adult has the lower extremity amputated at the hip joint. The whole weight of the body will rest upon the remaining limb, the spine must be twisted, and neuralgia of the face, chest, abdomen, and limbs, may follow.

When one limb is shorter than the other at birth, or is perceived when the infant walks, artificial means should be employed in all cases in which they are admissible. If the shortening is trifling, it may be remedied in some measure by a high-heeled shoe, by an iron patten or clog, or some such contrivance.

Inequality of the inferior extremities may be caused in children by paralysis, or disease of the hip, knee, or ankle joints. In the first case, the limb is observed to waste at the period of dentition or ablactation. The means of cure are to improve the digestion and general health by gentle aperients, chalk with mercury combined with rhubarb, &c., quinine, preparations of iron, friction, cold sea-bathing, nutritious aliment, warm clothing, exercise in the open air; in fact, all restorative means employed in rachitism, scrophula, and during the convalescence after acute diseases, such as fevers, scarlatina, small-pox, measles, inflammation of the lungs, &c.

Deformities from Malformation of the Hip Joint.—Congenital malformations of the thigh bones and sockets (acetubala) are occasionally observed. Deville, Crele, Palleta, and Dupuytren, have described such cases. The first three mentioned relate examples, in which one or both acetubala were filled up, and the head of the thigh bone rested on the hip or vicinal fossa. In such cases the limb was shortened. Even the head and neck of the femur (thigh-bone) has been absent (*Palleta*). Baron Dupuytren has given an admirable account of such cases (*Repertoire Gen. d'Anatomie*, tom. 2), and also M. Cruveilhier (*Anat. Pathol.*) Mr. Beale has abridged both descriptions (*Trea-*

tise on Deformities, &c. 1830), a work which ought to be in the possession of every medical practitioner, and to which I beg to refer my hearers. This deformity impedes locomotion, and tends to induce spinal curvature. It produces the same effects as dislocation of the thigh-bone. (See Sir Astley Cooper's work on *Dislocations*; *Cooper's Surgical Dictionary, &c.*) The disease may be readily mistaken for scrophulous inflammation of the hip joint. Baron Dupuytren states, that he met with persons affected with this malformation, who had been confined to the horizontal position for several years, and had been unnecessarily treated with repeated leechings, blisters, moxas, cauteries, &c., without any advantage. The absence of fever, pain, inflammation, fluctuation, and constitutional disturbance, will readily enable us to form an accurate diagnosis. Dupuytren attributes such malformations to intra-uterine luxation caused by the movements of the foetus in the womb; and Geoffroy St. Hilaire, with much more reason in my opinion, to some accident which has deranged the order of embryonic development. The former has invented a bandage for such malformations, from which a few have derived benefit.

Malpositions of the acetabula, caused by rickets, may also induce lameness on one or both sides; but the history of the case will enable us to diagnose correctly.

Delpech describes cases of lameness caused by shortening of the psoas magnus, iliacus internus, flexors and extensors of the thigh-bone; to remedy which, he advises continuous extension; and in elongating shortened muscles their size increases.

Deformities and Contractions of the Knee Joint.—These are of two kinds—the knees are turned inwards or outwards; but the former are the most common. Mr. Beale, in his work on Deformities, gives a minute account of the anatomy and pathology of these affections, which my limits do not allow me to transcribe; but his account of the treatment deserves attention.

Deformities and Contractions of the Knee and Ankle.—These diseases are sometimes, though rarely, congenital. When they occur at birth they are easily cured, by placing the joints in their natural position, and retaining them so by appropriate splints and bandages (*Venel, D'Yvernois, &c.*) Our chief object is to overcome the rigidity of the muscles and ligaments. In what is called white swelling, it is important to prevent the limbs from uniting in an angular direction, and this can be effected by the means already mentioned. It is old-fashioned surgery to allow the knee to form an angle nearly acute with the thigh; and, according to Sir Astley Cooper, it is much better to cause the inferior extremity to be straight. (See his *Lectures on Surgery*, 1824.) It is remarkable what a degree of rashness is employed in these cases. I knew a young

lady, the daughter of an eminent physician, whose leg united in an angular form with the thigh. The best advice was previously had, and the only remedy proposed was amputation, to which the father would not consent. A curved joint finally formed; and, as the sufferer was a beautiful girl, her condition excited great sympathy and commiseration. She had also lost her father. An empiric boldly proposed to cure her. She consented. He placed her on a sofa, and with force extended the diseased limb. He then applied splints and bandages, and kept these constantly wet with vinegar and water. In six weeks the limb was straight, with an anchylosed joint. Few educated surgeons would attempt such an operation, because ninety-nine out of a hundred patients would be destroyed by it. In cases of white swelling of the knee and other joints, great success follows the use of the different preparations of iodine, employed both internally and externally. The proto-ioduret of mercury*, the deuto-ioduret of mercury†, the ioduret of lead‡, the hydriodate of potass§, the hydriodate of iron||, and, in the worst cases, the ioduret of arsenic¶, might be employed with advantage. As these remedies are not, as yet, in our British pharmacopœias (for we are proverbially slow in adopting new medicines). I therefore deem it advisable and necessary to state their doses. I may also mention another new remedy in ulceration of the cartilages of the joints—hip, knee, ankle, wrist—diseases intimately connected with white swelling, is mercury, which was successfully employed by Dr. O'Beirne, of Dublin, and the results of his experience attested by Dr. M'Dowel, Mr. Carmichael, and Mr. Roney. (*Dublin Med.*

* Proto-ioduret of mercury—dose for an adult, gr. one-eighth to one-half, in pills; dose to be proportioned according to the age and strength of children. Ointments, ℞ i—ij, iij, iv, to ℥ ij of prepared lard.

† Deuto-ioduret of mercury—dose for an adult, gr. one-sixteenth to one-half in alcoholic solution or pills—ointment, ℞ i—℥ jss.

‡ Ioduret of lead—gr. i—x; according to M. Bailly, gr. i—xxx. I have found this preparation extremely successful in scrophula, and in syphilis complicated with it.

§ Hydriodate of potass, gr. x—xv, in distilled water, ter in die; ointment, ℥ ss—ids—℥ j); sometimes with tinc, opii. ℥ j.

|| Hydriodate of iron. Internally as a tonic, gr. ij—x rapidly increased to xx.

¶ Ioduret of arsenic, in cases of adults generally; when scrophulous persons have syphilitic disease of the bones, and in necrosis, it possesses the properties of its component parts, is extremely poisonous, and has hitherto been used externally; ointment, gr. iij—℥ j. It would be wrong to give to children, unless every other remedy had failed, and then in extremely minute, infinitesimal, or homœopathic doses.

Journ. 1834, vol. 5; *Lond. Med. and Surg. Journ.* 1834, vol. 6).

Deformities of the Feet—Club-foot, &c.—The deformities of the feet, as when turned inwards (vari), or outwards (valgi), or when the infant walks on its toes (pes equinus), generally admit of complete cure. Numerous infants were treated by me successfully. The bones and ligaments in such cases are easily reduced to their natural position by proper bandages and splints: but a cure is extremely difficult when deformities occur after birth. I am borne out in this opinion by Mr. Beale, a late and excellent writer on Deformities, Distortions, and Contractions of the Limbs, Joints and Spine, 1831, who thus expresses himself—"There is no case of club-foot, however bad, which may not be remedied, and but few which cannot be altogether cured, by proper means employed immediately after birth. The earlier the period when these malformations are treated, the more simple are the means necessary for their removal; and, by great perseverance, these deformities may often be cured before the period arrives when the child should walk. It is a disgrace to civilized society, in the present advanced state of science, to witness the cases of distorted feet which present themselves in this town; for there are not ten cases in a hundred that might not have been during infancy entirely cured, and in the rest the deformity might have been considerably diminished. I never pass a day without observing adults with various degrees of club-foot, from a slight inflection of one foot to those cases of great deformity, where both feet are contracted and turned inwards; every one of which might have been removed, if properly treated in the early part of life. They may be alleviated at any time before the growth of the body has ceased; but, of course, the longer the treatment is delayed, the more difficult it becomes: after the age of 10 or 12, a perfect cure rarely takes place, and the earlier means are adopted for relief the better."

There are three species of club-foot; when the foot is turned inwards (vari), outwards (valgi), and when the infant or adult walks on the toes, or in common language, pointed toe (pes equinus, horse-hoof.) In all these deformities there is not a complete dislocation, as would appear on a first view of the affected limb. There is not a tibio-calcaneo (dislocation of the leg and foot), but it arises from a torsion of the bones of the foot, the os calcis, the tarsus and toes. The result is a displacement of the sole and instep of the foot, a shortening and tension of the flexors of the leg, an apparent curvature of the leg and knee; and the effect will be an unsteady gait. Because the weight of the body is not supported on a sufficient base. It is important to state that the bones of the whole body are imperfectly ossified at birth; are partially soft and easily

placed in their natural position. This fact justifies the conclusion that club-foot is easily cured, when proper means are employed a few days after the birth of the infant.

The causes of these deformities are unknown. They are attributed to the restrained position of the infant in the maternal womb, when the amniotic fluid that surrounds it is small in quantity, to an arrest of development (Breschet, Chaussier, Cruveilhier), to feebleness or paralysis of the abductor muscles (Beclard), and they also accompany spina bifida. It is true that the infant may not move during the whole period of pregnancy, or at least is not felt to move by the parent; nevertheless, it is not only born alive, but perfect in all parts. Deformities often occur after birth, and are ascribed to the nurse's holding the infant too much on one arm, and consequently, inclining one lower extremity inwards. This constrained position of the infant may possibly induce disease; but it cannot, in my opinion, be a very frequent cause, as nine in ten mothers and nurses, who are right-handed, hold the infant on the right arm; and yet deformity of the lower limbs is comparatively of rare occurrence during infancy, unless errors in diet, clothing, cleanliness, exposure to the air, exercise, prevail. All debilitating causes of this kind, all acute diseases, teething, whooping cough, inflammations in the head, chest, abdomen and limbs, eruptive fevers, scarlatina, small-pox, measles, &c. &c., predispose young infants to deformities in the spine and limbs. The reason is obvious. The muscular power or strength is diminished, and the muscles of the lower limbs are unable to sustain or bear the weight of the body, and the bones being soft, readily bend, or to use a popular phrase, "grow out." It is generally observed that deformities commence about the time of weaning, when improper food is usually given, the infant being peevish on account of the loss of the breast milk, and soon getting into a delicate state of health. But the disease may commence earlier than the period of ablation or weaning, especially in infants of the poor, who are mismanaged from the moment of birth, as regards diet, clothing, cleanliness, exposure to a pure air, &c. Under all these, and many other debilitating causes, the digestion is impaired, a sufficient quantity of nourishment is not extracted from the food by the enfeebled stomach, a sufficient addition of nutriment (chyle) is conveyed to the heart and not added to the blood; a deteriorated and deficient quantity of blood is circulated to the different organs, and these being deprived of a sufficient supply, as in health, become enfeebled, cannot perform their functions or uses properly, and delicacy or disease in some one of them, according to the predisposition of the individual, is the consequence. In fact, the digestion,

circulation, or innervation (power of the brain and spinal marrow) being defective, or deranged, must derange every organ in the body, the muscles amongst the rest, and thence those of the lower limbs and trunk are rendered incapable of supporting the weight of the body, and deformities of the limbs, spine, growing out of the shoulder or back, is a frequent result. It will appear by a reference to the remarks on the physical education of infants, that few of them escape from irritation in the stomach and bowels, in consequence of the administration of improper food and drink to them. If these parts be disordered, they derange the respiration, the brain, and all parts—a fact proved by the innumerable complaints and disorders in almost all parts of the body, by persons labouring under indigestion, hypochondriasis, nervousness. The same train of disorders exist in children. But supposing the digestion to be good, which is seldom the case, unless the infant thrives, the nutriment or chyle cannot be changed into vivifying blood, unless the process for that purpose (respiration) be healthful. Exposure to a pure air is necessary for the proper performance of this function. But in large crowded cities and towns, the children of the poor and labouring classes seldom enjoy the essential advantage of good air, or other hygienic means; and the result is, that delicacy and disease is most common amongst them. But admitting the digestion and respiration to be natural, health cannot be preserved unless exercise be taken in the open air, especially on foot. This circulates the blood to every part, by increasing the action of the heart and arteries: strengthens every part; and those who live in rural districts are proverbially the healthiest of the population.

When infants are enfeebled by mismanagement or disease, from the first to the fourth or fifth year, they are very liable to deformities of the spine and limbs. The enfeebled muscles are not able to support the trunk; and the spine and lower limbs become deformed. This is of frequent occurrence from the twelfth to the eighteenth month, or second year. The infant loses the power of its limbs, or, to use a common phrase, "gets off its legs." About the period of weaning or of teething, or after any severe disease, the joints of the ankles, wrists, knees, hips, and spine, are weakened, and cease to perform their functions. The bones bend, and deformity is the consequence. It is, however, consoling to know, that children who become deformed after birth, from the age of one to five years, almost invariably recover and become straight, if the general health be improved, and the treatment be rational, even without the use of mechanical contrivances. The reason of this favourable result is clear to the educated practitioner. He knows that the bones and ligaments which unite them, are but partially deve-

loped in the first year of infancy; and if the muscles be strengthened by proper diet, healthful respiration, exercise in the open air, cold bathing, tonics, and other invigorating means, they will speedily restore the deformed bones to their natural situation, and the body to the straight and erect position. This fact is attested by every modern writer on deformities, and on rachitism or rickets. (Mason Good, S. Cooper, Harrison, Beale, Scarpa, Dubois, Delpech, &c. &c.) I have seen it proved in a vast number of instances. Congenital deformities which occur before birth, are, on the contrary, never removed without mechanical aid, but are generally cured by this means. The explanation of this apparent contradiction is simple. The infantile constitution at birth, is much more frail and feeble, than at the age of a year or two; and requires infinitely more care and attention. At birth, the infant is almost deprived of exercise, the muscles are slightly exerted by dandling, holding in the arms, and other positions: they are already so weak as to admit of deformity; and therefore we must assist nature by mechanical contrivances, and support the bones in their proper situations, which the muscles and ligaments cannot do by themselves.

The indication of cure is to reduce the deformed foot to its proper position, and secure it with a bandage properly applied. The younger the infant the easier to cure its deformities. Great care should be taken not to cause undue pressure. The bandage ought to be applied, first round the toes, and carried on towards the leg; and strips of strong paste-board, or their splints carefully enveloped in lint, may be placed, if necessary, on the sides or sole of the foot. Lastly, the folds of the bandage should be stitched together; and it should be removed and another applied every twenty-four hours. I have cured several new-born infants by this simple plan of treatment, in the course of six or eight weeks, but others required a longer period. The difference of constitution, and the solidity of the bones, vary very considerably in infants; and, consequently, the period of cure cannot be alike in all cases.

In cases of varus, or turning of the foot inwards, the chief indications of treatment are to restore the foot to its proper position, and to retain it so. Scarpa devised an instrument for this purpose, and Colles another. The first is illustrated by a plate in Mr. Beale's work on Deformities, to which I am much indebted for many facts relating to this class of diseases, and that of Dr. Colles in the Dublin Hospital Reports, vol. i.

As a general rule, neither bandages nor mechanical contrivances should be allowed to cause pain, nor to impede walking, if used when the infant can attempt this kind of locomotion. Manual frictions of the muscles of the affected limb should be made morning and evening for at least an hour after bandages or instruments are removed, as

these strengthen the muscles. When the foot is restored to the natural position, a boot should be worn, with the outer side of the sole thicker than the inner, so as to incline the foot outwards.

In valgi, or turning of the foot outwards, the instrument must be reversed.

In the *pes equinus* or pointed, the object is to reduce the foot and toes to their ordinary positions: and, perhaps, the best apparatus for this purpose is that of Mr. Amesbury.

In treating these deformities, it is imperiously necessary for the practitioner to possess an accurate knowledge of the anatomy and natural positions of the affected parts, or it will be impossible for him to succeed in removing their derangement.

There is much more difficulty in removing the *pes equinus*. This generally affects one limb; the individual walks on the toes; there is a permanent extension of the foot, and it is on the heads of the metatarsal bones that the person stands or walks. Some have supposed that this deformity was caused by a rigidity and shortening of the extensor muscles; to remedy which, Delpech proposed to incise the tendo Achillis. It appears to me, that this operation would only be justifiable when all other means had failed; and even then, I very much doubt its propriety.

It is a pleasing reflection to think on, that though infants are subject to numerous deformities, we seldom of late years observe an equal proportion in adults. It is true, we now and then see instances of in-knee, baker's-knee, and bandy legs; but these are comparatively rare at present. Mr. Beale observes, "I am acquainted with several children, more or less affected with deformity of the legs, in whom I could attribute them to no other cause than that of being instructed to stand and walk too early; their health has been uniformly good. Nutrition has apparently gone on as it should do, and yet about the age of twelve or eighteen months, their legs have begun to show signs of weakness and deformity." He goes on to state that children should be allowed to stand and walk, when they shew an inclination.

Recent deformities of the knee are said to be curable by some continental writers, by proper mechanical instruments (Venel and D'Yvernois.) They devote much more attention to orthopedic medicine in France, than we do in this country. Justice obliges me to add, that we have not, as yet, a single Institution in the metropolis appropriated to this class of diseases. She also reminds me, that Dr. Harrison, whose name has been honourably mentioned in these pages, has lately given the sum of £1000 towards the funds of such an establishment. Our munificently endowed hospitals have done nothing for the removal of spinal and other deformities—not even Guy's or St. Bartholomew's Hospital, with immense funds, notwithstanding the Abernethies, Astley Coopers, &c., once connected with them.

It is a singular fact, that there is no work in the English language excepting Mr. Beales', which treats so favourably of human deformities of the bones. There are many excellent treatises on particular varieties of spinal distortion, but these are silent on deformities of the limbs. Even our works on surgery treat of these maladies very superficially. Foreign writers have, on the contrary, devoted great attention to this class of diseases, and have employed a vast number of well constructed mechanical contrivances for the removal of human deformities.— These may be seen and examined in their numerous orthopedic establishments. This branch of surgery has been hitherto unaccountably neglected in this kingdom, and generally consigned to mechanics, though human deformities are of very frequent occurrence. They have been ascribed to the progress of arts and civilization, as they seldom occurred in remote ages, and are only met with among the inferior animals when domesticated. But they are extremely common in the human species. Perhaps the proportion of half the female children under the age of puberty suffer from more or less contortions of the spine, and are rendered nervous and enfeebled during life. The frequency of spinal and other deformities is to be attributed to errors in physical education, and to the indefensible custom of confining girls to a restrained position for several hours a day. Their brothers, who are not so constrained, play and romp about; they exercise their muscles, and for the reasons already stated, are sound and healthful, and scarcely ever suffer from deformities of the bones. I have fully described the cause of deformities in girls in my remarks on scholastic discipline and education. I may, however, make one observation on the subject in this place, and it is this: that it is impossible for any being (young or old) to retain one position for twenty minutes at a time, without fatiguing and enfeebling the muscles, and rendering them incapable of keeping their bones in their proper places. Let any one try the experiment of standing or sitting in one position for a quarter of an hour, and he must admit the truth of my statement. At our next meeting, I shall describe spinal deformities, and conclude this subject of displacements of bone.

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M. VIREY ON THE GENERATION OF
ANIMALS AND PLANTS.

(Continued from Vol. 6, p. 628.)

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*On the different Modes of Reproduction of or-
ganized Beings compared to Man.*

If there was on earth no other mark of divine wisdom than that which is apparent in the sexual organs, this would be sufficient to prove the existence of an intelligent Being. How is it possible to mistake the relations so intimate and so perfect between the sexes?

Who does not perceive that the objects for which they are designed are most wisely combined? The disposition relative to these organs is not only admirable, but even their influence on the living body, and especially on the whole economy of the individual, is adapted with a sublime foresight. This concordance of individuals, this tendency to reproduction, this community of sentiments, this reciprocal concourse of actions, can they be the work of chance? This perpetuity of beings, this immutability of each species, which do not confound themselves with other beings, do these depend upon chance and an indefinite aim?

The sympathies between the sexes incline all to love, though they disguise it under a thousand forms. Females, in general, are the site of the species: they contain the essential principle of it; every female individual is exclusively formed for generation. Her organs are the root and foundation of all her structure. The principle of her life resides entirely in these organs, and greatly influences the rest of the living economy. Males are more erratic in generation; their sex is not the most important part of them; but in the female it is, on the contrary, her very soul, if I may use the expression. Males do not love, to speak correctly, their females, but the new being of which these are the depositories; for they have no more love when they no longer reproduce. Thus fishes only love the eggs of their females, and follow them for this sole object. Among animals the female is no longer sought for by the male after she has conceived. Individuals who have been subjected to castration, inspire contempt, and not love. This sentiment, then, has not power or vivacity, except so far as it serves to the production of the species; and it has not for its object engendering individuals, whilst they may be indifferent to each other, without the desire to reproduce each other.

Nevertheless, the generative organs have their periods of activity and repose. Almost all vegetables produce flowers and fruits once a-year; most animals couple but once a-year; sometimes many species engender oftener; and others more rarely. In plants, the organs of generation fall with the seeds and fruits, and are renewed every year. In animals, the same sexual organs serve during the whole course of their life; but these have periods of development and excitation which we call the *rut* or *heat*, after which they wither, diminish, and almost become obliterated, until a new season of love awakens them from their torpid condition, and recalls them to a momentary existence. The activity of the life of the species, or of the generative faculty, is intermittent or periodic. In the human species, and in animals which equally consume abundant and nutritious food, the generative faculty is perpetual, and their sexual organs remain in a condition more or less fitted for

the act of propagation ; nevertheless, we here remark the periodical impulse of the life of the species. Thus, the woman is subject to a periodical evacuation once a month, and so, according to some, are a few of the monkey tribe, but in an indetermined or irregular manner*. The females of quadrupeds have their periods of amorous impulse, at their period of *rut* or *heat*. There is something analogous in birds whose sexual organs have become excited, hot, red, and dilated, and are in a kind of erection until the act of conception is accomplished. Reptiles, fishes, insects, and worms, have a similar excitement or orgasm at fixed periods. In fine, plants develope their buds, expand their flowers, display their petals, elevate their stamens and pistils, until fecundation is effected.

Not only does there exist a time of amorous effervescence and of rut in all living nature, but it is principally at the moment of generation that the sexual organs are excited to the highest degree of sensibility. All the powers of the soul then contract themselves in these organs, which are in a violent state of excitation and erection. These organs possess an individual life which is very involuntary, which is torpid during a greater part of their existence, which awakes at certain epochs, in the same manner as our active life, which reposes every night and awakes every morning. This vitality of the sexes is less durable than that of individuals, for it does not commence until the age of puberty, and it dies before the body that produces it. Thus the plant does not develope its flowers, for the first time, but at a certain period of its existence ; the animal does not become pubescent until its organs and powers are sufficiently develope^d. In the same manner, the vegetable and animal which are too old, are dead as to reproduction. Their sexual organs are hereafter incapable of performing this function. The duration of living bodies may be divided into three periods, the two extremes of which are the frozen zones of existence, the intermediate is the torrid zone of life.

Love, however, announces the speedy ruin of individuals. We love, because we do not live for ever. Every living being reproduces itself, because all perish. Love is the messenger of death. If nothing perished, there would be no need of new generations, and love would be exiled from the world. Minerals are in this condition, they never die, but they never engender. We pay love at the expense of our life. Who can suppose that this sentiment, so delightful, should nevertheless be a proof of our mortality? We give our life to other beings, as a father who

divides his goods among his children. To engender, is to say, to make his will, and to prepare for death. But nature has surrounded the act of generation with so many attractions, that she has entirely disrobed it of all sadness as regards us ; nevertheless, when propagation is accomplished, an animal falls into depression and sadness, it perceives fatal losses ; the plant is deflowered, its petals are withered, its freshness is destroyed, its beauty has vanished with the morning mist, its bitterness remains, as Lucretius has it :—

“ ————— E fonte lepōrum
Surgit amari aliquid quod in ipsis floribus
angit.”

It is a mixture of grief and pleasure which makes the great charm of love. It is necessary that pain should prevent the satiety of pleasure, and that pleasure should soften the suffering of pain ; without this compensation, love would be very soon exhausted, either by satiety, or by pain, like a fire ; but thus good is counterbalanced by evil ; that love subsists like a fire, which does not exist but by a continual action ; no one loves, unless agitated by hopes and fears ; because we remain indifferent whilst the soul is in repose. Love is in the combat, not in the victory ; it languishes in the bosom of pleasures, and reanimates by obstacles ; contradiction or opposition is its life ; that which torments it, pleases it, whilst that which constitutes its happiness causes its destruction.

VI. *Of copulation, and of the phenomena of impregnation ; of the unions of the different species, of pregnancy, and parturition ; of twins ; and the mode of nutrition of the fetus.*—We shall not enter here into the details, which relate to the preparation of the seminal fluid in the testicles of the male, nor into all the physiological phenomena which accompany copulation. Here we shall treat of the genital function in its generalities in all organised beings, and compare them with what is observed in the mammiferæ, and our species. The copulation of animals is more complicated than the act of generation in vegetables : when an animal enters the season of love, it is agitated and loses repose ; an ardour of inquietude torments it ; a secret fire devours it, it exhales in its whispers, and announces its wants by its cries and accents of tenderness : the bird in its cage chants its pains and its pleasures ; it calls its true love, constructs its nest, and defies its rivals to combat. The time of love is also the period of strife among animals. Jealousy is a passion instituted by nature, and destined (who will believe it) to enable the offspring to reject the feeble and the diseased, and to give preference to young, vigorous, and robust individuals, so that the species may maintain itself in all its vigour or power. Jealousy is a misfortune to an individual, but it is useful to the species, and considers this object only. As I have al-

* The ablest physiologists deny this, and it is well known to every obstetrician, the amorous impulse is extinguished in most women during menstruation.—*Trans.*

ready stated, this is the reason that so many animals combat to enjoy it. Love is the brother of war, and Mars is always loved by Venus. Females of all animals prefer the most courageous males by an amorous instinct, which is very remarkable. The feebleness of the one aspires after the strength of the other; courage is the first title of love; the fervour of age, the vigour of the limbs, the activity of instinct, the impetuosity of the passions, and the vehemence of the appetites, announce that the individual is not incapable of giving life. When we examine the human species, we find how much nature is cherished by social fetters, which become more powerful by religion and laws in the age of love. All the fine sentiments which decorate the title of moral love, all the metaphysics of sentiment and delicacy emanate almost from the physical condition, and belong to it. Graces, charms, and amiability are physical qualities, and it is from these that love emanates. The moral condition has, I know, great influence on love, but these moral qualities, so powerful on sensitive hearts, have a deep root in the body, and are not independent of it.

Love, upon which so many reason, is it not known to all? Nature, much more ingenious than man imagines, directs the moral and intellectual faculties to the good of generation. It is an error to consider love a mere brutal and carnal passion; man seasons it with modesty, attachment, and mutual tenderness; love requires a total abandonment of his object; it inspires a total and reciprocal abnegation, it occupies the whole soul; it gives the gift of life itself. Whoever does not know that he must die, is incapable of true love. The attachment of the world, the laws of society, human conventions, every thing must yield to it; behold love as nature made it—it is master of every thing, or it is nothing. We think we love an individual on her own account, but it is most true that we do not really love her; it is her reproductive faculty, that which emanates from her, it is the posterity of which she is the depository; for when a woman is no longer capable of engendering, love entirely ceases. We also observe that most men have less love for a pregnant woman than for one who is not in this condition, although they entertain great respect for the first, but great tenderness and veneration for the second. Our sentiments are naturally proportioned, and by instinct, with the state of woman. Nothing is blinder or more clear-sighted than love; and it is this that renders it inconceivable. It exhales its emanations of sympathy between the sexes. There is such an accord between certain individuals, such a harmony between certain temperaments, that one loves one person, and hates another without knowing the reason why.

What is this sympathy of hearts, those secret ties which attach the sexes by mutual love? Whence proceeds that concordance more powerful than our life, and by which we become capable of exposing it to a thousand deaths for her whom we love? Why are the most violent loves transformable into the most intense hatred? There is no medium in ardent souls. This impetuosity of sentiments is derived from the physical condition. These relations of sympathy are nevertheless the result of a harmony of age and character, of the sensibility and correspondence between the moral state of the one sex, and the other. Nature is by no means content with the physical condition alone—she wishes the entire individual, to immolate it to posterity. We estimate the mind of a man by the greatness of his moral love. That which we call lukewarmness of love, is a smallness and nullity of mind, such as we see in those who are engaged in ordinary pursuits, and incapable of enthusiasm.

When the whole mind is not absorbed in the act of sexual union, the products are feeble and delicate as we generally observe in the infants of men who make great mental exertions. The sons of celebrated men are almost unworthy of their fathers. We never see a great man engender great men. The sons of Socrates, Hippocrates, Chrysippus, Pericles, Thucydides and Cicero, among the ancients; of Racine, La Fontaine, Henry IV. of France, Napoleon, Crebillon, John Hunter, Cullen, and a thousand others which might be cited, not one of them resembled his father. On the contrary, most of the men who became illustrious by character, genius or valour have been the fruit of ardent love, and had for parents vulgar men, whose merit was entirely physical. A great number of celebrated men were illegitimate, who were truly the sons of love. Nevertheless, many women have pretended to have conceived without having participated in pleasure; others have been impregnated during sleep; but these facts admit of doubt, for it appears to be scarcely probable that conception could be possible without an intimate and tacit consent of organs, much less that the will was really wanting. It must be remembered that amorous ideas exist during sleep, and induce the seminal emission of man; and therefore we may reason from analogy, and conclude that they exist in the human female. Aristotle asked why deformities and monstrosities were more frequent in the human species than in other animals; and he believed the cause to be, that our species sometimes perform the generative act negligently, and are thinking of other matters; while beasts perform love more simply and give themselves entirely to it; and thus it is that rustics living in villages or the country, who are generally robust and vigorous, produce the finest and strongest infants, because they follow nature's

dictates more closely than the great people of the age, who are devoured by passions, burthened with anxieties and troubles, absorbed in difficult affairs and abstract meditations.

The pleasure that nature joins to sexual union is the only attraction of reproduction, an attraction so imperious and tyrannical as to be required as powerfully as any other want; for animals are impelled to it by an instinct stronger than life: *in furias ignesque ruunt amor omnia ibidem*. Even before they have a knowledge of the pleasures of it, they have an involuntary presentiment of it: *mentem Venus ipsa dedet*.

Among apes, parrots, pigeons, ravens and other birds the moment of enjoyment is preceded by kisses and tender caresses, as in the human species. Apes, bats, hedge-hogs, and porcupines, seals, or sea-calves, the cetaceæ, (whales), copulate abdomen to abdomen, whilst the others copulate like quadrupeds; dogs, wolves, and foxes remain in close union in the venereal act, because the gland of the male swells very much, and the vagina closes by contraction, so that the male organ is arrested during the time of the ejaculation of the seed; and this is necessary in these animals, as they are deprived of seminal vesicles, and their seed is not darted into the uterus, but distilled drop by drop. If they are separated at the moment of this slow ejaculation, the female will not be impregnated, and the species will be extinct. Female and male animals are mutually attracted and excited by the odours which they exhale in the time of rest, and which is secreted by the glands. These odours are placed near the sexual organs in beavers, civet cats, &c.

In all the mammiferous animals there is an ingress or intromission of the male organ, and the female have a clitoris or organ of pleasure. The moment of sexual enjoyment is accompanied by a universal trembling of the whole body, and a kind of slight convulsion, which ends in a comatose or extatic state. Coition has been compared to a fit of epilepsy, and many of the characters of both are similar; for the former entirely absorbs the mind and body; we too neither hear nor see anything; all is death, except pleasure; the soul is absorbed in love, and some persons have lost their lives in this crisis. (*Schenk de Coitu; Marcel. Donat. Hist. Mirab. lib. v. cap. 17*). And thus it is, that coition is mortal in certain nervous diseases, or after great wounds or hæmorrhages, &c. or when it is too often repeated, it ruins and destroys the whole of the living economy. It is right to think before we engender, as we are about to deprive ourselves of life, and to shorten our days; and this is the proof that enjoyment of sexual love is mortal, as no one can communicate life but at the expense of his own.

It is remarkable that the sperm has the same odour as the pollen of most plants.

This odour belongs to many plants, the berberis, the fagi, &c. The pollen of vegetables contains very small capsules, which humidity opens; and according to Bernard and Jussieu, a very subtle powder escapes and penetrates into the pistil of the ovary. Microscopic animalcules are observed in this sperm of animals, but these have nothing to do with fecundation, contrary to the opinion of Læwenhoeek, Hartsoecker, and Vallisnieri, since Spallanzani fecundated the eggs of frogs with particles of sperm perfectly exempt from these animalcules.

It has been said that males enjoy more pleasure than females, as the latter are more tranquil and less agitated by enjoyment. It appears that the female has a sweet pleasure, a kind of intimate felicity, while pleasure is stronger and more poignant with the male. It is he in general that seeks and solicits, while the female attends and yields. This combination was necessary, because the male cannot act but at certain moments; but the female is almost always ready. Some animals, as the cat species, go and seek the male. We hear them at midnight express by lamentable mewings, the violence of their desires, their amorous rage. Nothing so readily excites rage as violent love: under this influence life knows nothing else; dangers, combats, wounds, are the ordinary effects of this cruel passion. Love commences in rage and is often concluded by a mortal hatred. The uterine organ sucks or rather aspires the fecundating sperm to the ovaries, while the fallopian tubes seize the ovaries and allow the prolific fluid to pass to those organs.

Love is still more ardent among birds than among quadrupeds, on account of the warmth of their constitution and their extreme vivacity. Their coition is rapid and frequently repeated. A cock copulates with twenty or thirty hens in some hours. These birds have not a perfect penis, but only a kind of tubercle; there is no ingress or intromission, but a simple affrication. Woodcocks fall into an ecstasy during the season of love; and many birds in cages, which cannot enjoy their females, die of desire, and chant it with a sort of rage; for the songs of birds are the expression of their love—they chant no longer than they have amorous desire; and such is the fact as regards the cries of quadrupeds.

Cold-blooded animals are more languid in love than the preceding, such as lizards, serpents, &c. It is clear that the more vivid the pleasure, the more rapid, because if prolonged, it would necessarily destroy the power of life; while on the contrary, the slower it is the more feeble. It is remarkable, that cold-blooded animals, as lizards, serpents, &c. have a slow copulation and remain many days in it. They are then in a state of stupor and immobility; they neither eat nor stir, as if wholly engrossed in their pleasure. The genital organs of both sexes

become congested, hot and vascular, and those of plants have acquired a temperature from 20 to 80 degrees of Reaumer.

The female animals have a kind of modesty, and it is this perhaps that leads the males to search after them. The fervour of love is much greater in males when they have a great number of females; and thus it is that the polygamous are much more ardent in love than the monogamous, which are more generally cold and insensible. The females of cold-blooded animals are not well fitted for procreation, and hence the animals effect this function without the body. It is for this reason too, that nature arms the males with claws, harpoons, &c. to grasp and excite females.

The sexual unions of quadrupeds are, in general, vague and without choice, the male selecting the first of his species, whilst he always prefers the most vigorous females, which seek and prefer the most vigorous males. Thus we observe very small bitches copulate with large dogs, as if instinct had much more regard to the perfection of the species than to the pleasure of the individual. Monkeys are monogamous, but they do not always confine themselves to one female. The ruminating animals are polygamous, and they fight for their females. The sea-calves have their seraglios which they stoutly defend, and are as great tyrants over their females as the despots of Asia in their harems.

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A NEW PRACTICAL FORMULARY

OF HOSPITALS, OR A

Collection of Formulæ of the Civil and Military Hospitals of France, Germany, Italy, Great Britain and Ireland, &c., containing the Indication of the Doses in which simple Substances, magistral and officinal Preparations of the Codex are administered, the use of New Medicines, and general receipts on the art of prescribing. By M. EDWARDS, M. D., and P. VAVASSEUR, M.D., of the Hospitals of Paris—1834. Translated and augmented by M. RYAN, M. D. &c. &c.

(Continued from p. 211.)

Anti-dysmenorrhœal Mixture. (Ryan.)

Rx. Misturæ camphor, ʒ vss;
Tinct. guiaci. am. ʒ vj;
Liq. ammon. acet. ʒ j;
— opii sedat, ʒ j—iss;
Syrupi aurant. ʒ j.

Fiat mistura, de quâ, unum cochleare, amplum, mane, vespereque exhibeatur.

[This mixture is often beneficial in painful menstruation caused by irritable uterus in hysterical women. A tea-spoonful of laudanum is an old remedy in this country. Guaiacum is strongly recommended by Pro-

fessor Dewees, of Philadelphia, and acetate of ammonia by Professor Masyer, of Strasburg, and M. Cloquet, of Paris. (See *Ryan's Manual of Obstetrics, &c.*, 3rd Ed.) I have therefore combined them. It is to be recollected that dysmenorrhœa may depend on many disorganizations, which no medicine can relieve. T.]

Anti-arthritic Mixture. (Ryan.)

Rx. Misturæ camphoræ, ʒ v;
Tinct. guiaci, am. ʒ v;
Liquoris colchici, m xx;
Syrupi simplicis, ʒ iij.

Sit mistura, cujus capiat, cochl. ampl. tertiâ vel quartâ quâque horâ.

[This mixture is extremely beneficial in chronic rheumatism and gout, in the daily practice of the Western Dispensary, Westminster. I believe the liquor colchici is an aqueous solution. It has also been used with remarkable success at St. Bartholomew's Hospital. It has repeatedly succeeded in my practice, when the other preparations of colchicum had failed. It is also strongly recommended by Dr. Hue and Dr. Latham, of St. Bartholomew's Hospital, and also by Sir Charles Scudamore. T.]

SARSAPARILLA.

A stimulant, which appears to have a particular action on the skin, although it does not often promote perspiration. Very frequently employed, either alone or united with other vegetable sudorifics, in the treatment of constitutional venereal affections, chronic rheumatism, diseases of the skin, ulcerations of the larynx and pharynx, dependant on syphilis, or on the abuse of mercurials, &c.

Subst. incomp.—The infusion of galls, lime water, the acetate of lead, &c.

INTERNALLY.—*Powder.* ʒ ss—3 i. Seldom used.

Decoction. ʒ ij—iv, in ʒij of water reduced to i.

Sirop. ʒ i—ij.

Sirop. de Cuisinier. P. ʒ ss—i, in a sudorific ptisan, or as a vehicle for the corrosive sublimate, in the treatment of syphilitic affections.

[A vast deal of discrepancy of opinion prevails as to the best mode of preparing sarsaparilla for use. Dr. Hancock instituted, as incidentally alluded to in a former page, a great number of experiments on patients, by exhibiting the infusion, decoction, and extract, as prepared according to the British Pharmacopœias. He is convinced that long boiling destroys the medicinal property of this powerful remedy, and that the extract is totally inert. Repeated and multiplied experience has led him to the conclusion that infusing sarsa in hot water kept near the boiling point, is the best mode of preparation.—*Trans. of the Medico-Botanical Society of London, 1829. Part I.—Reviewed in the Lond. Med. and Surg. Journ. 1829, v. 3.*

Dr. O'Beirne, of Dublin, has found most benefit from an infusion of sarsaparilla in lime-water. He relates several cases of secondary syphilis cured by this combination, after the patients had taken large quantities of all the other preparations without effect. He has also employed it during the last 15 years (since 1820) in mercurial affections which had resisted all other preparations of this remedy. He has likewise found it a powerful auxiliary in nervous complaints, in cases of debility and loss of health from various causes, in scrophulous enlargements of the lymphatic glands, and in irritability and chronic catarrh of the urinary bladder. He states that beneficial effects are seldom observed sooner than the third week of its use, and the kidneys are the only organs on which it appears to exert any sensible action. Mr. Carmichael, the eminent colleague of Dr. O'Beirne, recommends the preparation about to be inserted in very strong terms. After many experiments on infusions of different strengths, the following is that preferred, and I beg to add the expression of my fullest confidence in the efficacy of this formula.

Compound Infusion of Sarsaparilla.
(O'Bierne.)

R_x. Rad. sarsaparillæ Jamacens, concisæ, ℥ iv;
Rad. glycyrrhizæ, ℥ ss;
Liquoris calcis, Oij.

Macera per horas viginti quatuor in vase vitreo optimè operculato, et in loco frigido et obscuro; dein cola in usum.

Sumat hujusce infusi dimidium, partitis vicibus, quotidie.

"This formula," says Dr. O'Beirne, "differs from that of the Dublin Pharmacopœia, first, in containing double the quantity of sarsaparilla; secondly, in containing liquorice root; thirdly, in requiring the infusion to proceed for twenty-four instead of twelve hours; fourthly, in not requiring agitation of the vessel. This formula also differs from that given by Dr. Copeland, first, in containing double the quantity of sarsaparilla; secondly, in not requiring the sarsaparilla to be bruised; thirdly, in not requiring agitation of the contents of the vessel; fourthly, in requiring the glassful to be very well, instead of slightly stopped." Dr. O'Beirne further states, that the reason he prescribes the lengthened period for the infusion was founded on an experiment. On passing a stream of carbonic acid into a quantity of infusion, which had been prepared in twelve hours, the fluid, which was previously clear, became quite turbid, and there was a white precipitate. On passing the gas into an infusion prepared in twenty-four hours, the fluid remained clear, and there was no precipitate.—(*Dublin Med. Journ.* 1834-5). *Op. Cit.*

It is of the utmost importance to the practitioner to be made acquainted with the proper formula for preparing a remedy which has long maintained a high place in the materia medica, but which has been unjustly deprecated of late years. The recommendation of one of our ablest physicians, who has enjoyed the most extensive experience during a long military service of the late war, and since the peace, in the largest hospitals in Dublin, as well as in a first-rate private practice, will be generally, if not universally adopted by the profession in all countries. T.]

Ptisan of Sarsaparilla. H. des Ven.

R_x. Sarsaparillæ, ℥ i—ij;
Aquæ, Oiv;

Decoque ad dimidiam, et cola. Cyathus sumendus pro dosi.

The Decoction de Sarseparielle of the Hot. D. contains ℥ i of the resin to Oiv of water.

Compound Decoction of Sarsaparilla. H. of London.

R_x. Decocti sarsæ. fervent. Oiv;
Radicis sarsæf. concisæ,
Guaiaci ligni rasi,
Glycyrrhizæ rad. contusæ, āā ℥ i;
Mezerei rad. cortisis, ℥ iij.

Decoque per quartam horæ et cola. ℥ iv—vj sumendæ ter in die.

Sudorific Ptisan. Hot. D.

R_x. Sarsaparillæ,
Guaiaci ligni, āā ℥ ss;
Sassafras, ℥ ij;
Aquæ, Oiv.

Coque et cola. Sumatur cyathus pro dosi in die.

Ptisan de Felts. (Lagneau.).

R_x. Sarsaparillæ, ℥ ij;
Smylacis, ℥ i;
Cort. buxi, āā ℥ iss;
Antim. sulph., ℥ iv;
Bichloratis. hydrarg. gr. iij;
Aquæ puræ, Oij.

Decoque ad dimidiam partem.

The antimony should be enveloped in a piece of linen, and suspended in the fluid during ebullition.

Employed in the treatment of chronic venereal affections. The dose is Oij. daily, taken at several times.

The *Ptisane de Felts* of the H. des Ven. does not contain either the sublimate or the smylax; but the quantity of the antimony is half as much as in the former ptisan. It is used in the same cases.

The *Decoction de Sarsepareille Comp.* of the H. de la Ch. very much resembles the preceding; the quantity of sarsaparilla is ℥ iv to Oiss of water, and that of the antimony ℥ i. It is used in the same manner and in the same cases.

Ptisan, called *Liqueur de Pollini*. H. de Ven.

Rx. Sarsaparillæ,
Cinchonæ, āā ʒ iij;
Pumicis,
Antim. sulphur, āā ʒ ss;
Aquæ puræ, Oviij;
Coque ad dimidiam, et adjice,
Potassæ subcarb., ʒ ij.

Misce.

Dose as in the preceding cases.

Anti-venereal Decoction. H: of Italy.

Rx. Sarsaparillæ, ʒ i;
Lichinis island, ʒ iiss;
Aquæ, q. s.
to obtain ʒ xiv of fluid, to which should be added,

Syrupi simplicis, ʒ i.

Fiat decoctum et divide in partes duas
sumat unam mane et nocteque.

Sirap de Chissinier Réformé. H. des Ven.

Rx. Sarsaparillæ,
Guaic. lig. ras. ā ā lbi;
Aquæ puræ, Oxij;
Sacchari,
Mellis, ā ā lbiiss.

Fiat syrupus.

It is principally used as a vehicle for the
Liqueur de Van Swieten.

[There are numerous drugs sold in London for sarsaparilla which are spurious articles. I have lately had a gentleman under my care, who purchased fourteen pounds avoirdupois of what was sold to him as the best sarsaparilla, and who made this quantity into decoction, and took it for secondary syphilis, without the slightest benefit. One pound of the genuine article restored him to health. T.]

SMILAX.

Used in the same cases as sarsaparilla, to which it is generally united. It cannot be depended on when used alone.

INTERNALLY.—*Decoction*. ʒ ij—iij in Oij of water.

[It is seldom used in this country. T.]

The *Decoction de Squine* of the Hot. D. contains only ʒ i of smilax to Oij of water.

Compound Decoction of Smilax. (Swediaur.)

Rx. Smilacis,
Uvæ passæ, ā ā ʒ i;
Aquæ puræ, Ovij;
Coque ad Oij, et cola. Cyathus sumendus pro dosi.

SASSAFRAS.

A stimulant, generally employed as a sudorific in the same cases as guaiacum, with which it is frequently combined.

INTERNALLY. *Powder*. ʒ ss—i. Not much employed.

Eau distillée. P. ʒ i—ij.

Huile essentielle. P. Gutt. ij—x.

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Compound Lime Water. H. of Italy.

Rx. Sassafras, ʒ ij;
Myristicæ, ʒ iij;
Glycyrrhizæ, ʒ i;
Aquæ calcis, Oiv.

Macera per horas quatuor et viginti, et cola. ʒ ij—iv sumantur sæpe in die.

In scrophulous diseases.

MEZEREON.

A stimulant and diaphoretic. Recommended in cases of constitutional herpes, scrophula and syphilis, &c. Not much used.

EXTERNALLY. It is employed as a rubefacient, and even a caustic. It is also used to establish exutoria, and to prolong the suppuration of those already existing.

INTERNALLY. *Powder*. Gr. i—x. Not much used.

Decoction. ʒ i—ij in Oij of water.

Decoction of Mezereon.

Rx. Rad. mezerei, ʒ ij;
Aquæ fontanæ, Oijj.
Coque ad tertiam partem et adde,
Glycyrrhizæ contusæ, ʒ ss.
ʒ iv—vi. sumantur ter in die.

In chronic syphilitic diseases.

EXTERNALLY. As a vesicant. A small quantity macerated in vinegar applied to the skin.

Pommade de Garou. P. Any quantity.

SUMACH.

In large doses a narcotic, acrid poison; in smaller ones an excitant, which appears to exert a particular action on the skin. It is employed in certain cases of herpes, chronic rheumatism, paralysis, &c. Not much used in France nor England.

INTERNALLY. *Powder*. Gr. i—iv, in pills.

Decoction. ʒ i—ij in Oij of water.

Extract. P. Gr. x—ʒi daily, and more progressively.

Pills of Sumach. H. of Italy.

Rx. Pulv. toxicodendri, gr. i;
——glycyrrhizæ, ʒi;
Succi sambuci, q. s.

Divide in pilulas iv sumendæ in die.

Excitant Potion. H. of Italy.

Rx. Extract toxicodendri, ʒ i;
Aquæ fontanæ, ʒ i.

Misce.

In dosibus, gutt. x, quotidie.

BITTER-SWEET.

A stimulant of the cutaneous system. Much used as a sudorific, in rheumatic and venereal affections, scabies, and many other diseases of the skin. Not so much used as formerly.

INTERNALLY. *Powder*. ʒ ss—j.

Decoction and Infusion. ʒ ss—i to Oij of water.

Compound Decoction of Bitter-sweet. H. of Italy.

Rx. Dulcamaræ, \mathfrak{z} ii;
Glycyrrhizæ,
Arctii lappæ,
Sassafras,
Guaiaci, $\mathfrak{a} \mathfrak{a}$ \mathfrak{z} ij;
Aquæ, Oij.

Decoque ad Oj, et cola. Capiat cyathum pro dosi.

In rheumatism, venereal diseases, &c.

ELDER (FRUITS AND FLOWERS).

A slight excitent and diaphoretic. Employed in rheumatism, gout, and all affections in which it is necessary to excite abundant perspirations.

EXTERNALLY, it is used in lotions, fomentations, ointments, &c. as a resolvent.—[But rarely employed in this kingdom. T.]

INTERNALLY. *Flowers. Infusion.* \mathfrak{z} j—ij in Oij of boiling water. The dose is a small cupful, hot, often repeated.

The Infusion de fleurs de sureau, of the Hot. D. and De la. Ch. contain \mathfrak{z} ij of the flowers.

Ptisane de fleurs de sureau. P. Taken in the same manner.

Eau distillæ. P. \mathfrak{z} ij—iv, as a vehicle,

Fruits. Rob de sureau. P. \mathfrak{z} iss—ij as an excipient.

[Some empirics in Ireland place great confidence in elder ointment in scrofula, using at the same time the "sweetening woods" already noticed. One of these persons proposed to cure a nobleman, who died of scrofula, with this nostrum. A relative of his was relieved by me of dysentery, and his friend, the empiric, offered to inform me of his ointment for fifty pounds sterling; but at length described it. I told him, it was a most inefficient remedy, and that it had fallen into disuse.

Oxymel of Elder. H. of Germ.

Rx. Aceti sambuci, unam partem.
Mellis, duas partes.

Decoque, linto igne.

It is used to sweeten diaphoretic drinks.

EXTERNALLY.

Resolvent Fomentation.

Rx. Infusi sambuci, Oj.
Spirit. camphoræ, \mathfrak{z} iv.

Fiat fofus.

TEA.

When taken hot, tea acts as a diuretic and diaphoretic; it is a powerful assistant of digestion.

[Black tea is a wholesome stimulant, but is injurious when the infusion is taken too strong. Green tea is excessively injurious. (See Translator's Lecture on Tea, delivered before the Medico-Botanical Society, Lond. Med. and Surgical Journ.)

Substances incompat. The salts of iron, gelatine, and lime water.

INTERNALLY. *Infusion.* \mathfrak{z} i—ij in Oij of boiling water.

SWALLOW ROOT. (Dompte-Venin.)

Taken in large doses, an emetic and purgative; in smaller ones, a diaphoretic. Not much used at the present day.

INTERNALLY. *Powder.* Grs. xvij— \mathfrak{z} ss in boluses.

Decoction. \mathfrak{z} ss—i to Oij of water. The roots of LOBELIA SYPHLITICA, of ASTRAGALUS, &c.; the woods of SANTALUM, RHODIUM, &c. possess diaphoretic properties, and may be employed in the same cases as the preceding substances; they are not, however, much used at the present day.

There is a syrup made from the petals of the red carnation, which is said to sweeten ptisans and diaphoretic potions, in doses of \mathfrak{z} i—ij.

The Espèces Sudorifiques pour Infusion. P. are composed of the following ingredients.

Rx. Sassafras,
Florum sambuci,
Folior. buglossi,
Petalæ rhæodon, $\mathfrak{a} \mathfrak{a}$ p. e.

The dose is \mathfrak{z} i to Oij of water.

The Espèces Sudorifiques pour Decoction. P. are composed of the following ingredients.

Rx. Guaiaci rasidi,
Sarsaparillæ,
Sonilacis, $\mathfrak{a} \mathfrak{a}$, p. e.

\mathfrak{z} i—ij in Oij of water reduced to a third.

VAPOUR BATHS.

In the hospitals these baths are prepared by putting hot water into a particular apparatus; but in private practice the use of the apparatus may be substituted by placing the patient in bed, and conveying to him a curved glass tube, whose opposite extremity is adapted, by means of a hole in the cork, to a bottle three parts filled with water, and placed on a chafing-dish.

These baths stimulate the skin in a high degree, and determine a copious perspiration. They are employed with advantage in rheumatic and cutaneous affections, &c.

Aromatic Vapour Baths. H. de Paris.

These baths are prepared by causing the vapour of water to pass through some aromatic plants placed in the apparatus of simple vapour baths.

CHAPTER VII.

MEDICINES WHICH ARE EMPLOYED TO ACT ON THE ORGANS OF GENERATION—EMMENAGOGUES, &c.

[THE secale cornutum and iodine, are, perhaps, the only medicines now in use, which have a direct influence on the uterus, when administered internally, T].

CANTHARIDES.

In large doses, cantharides is one of the most energetic acrid poisons, acting violently on the urinary organs, and often producing stranguary, hæmaturia, priapisms, &c.

In smaller doses it is administered in certain cases of paralysis of the bladder, impotence, chronic gonorrhœa, &c. English practitioners affirm that it is serviceable in epilepsy, certain diseases of the skin, &c.; but it is a dangerous medicine and not much used, except externally as an epispastre.

INTERNALLY. *Powder.* Gr. i—iv in pills.

Tincture. P. gutt. iv—x in an emulsion. This tincture contains 1-55th of the soluble principle of cantharides.

Diuretic Powder. H. of Germ.

Rx. Pulv. cantharid. gr., iv;
Camphoræ, gr. viij;
Sacchar. lactis, ʒ iij.

Divide in chartulas sex, sumendæ in die.

Pills of Cantharides. H. of Germ.

Rx. Pulv. cantharid. gr. vi;
Sacchari. ʒ ij;
Pulv. cinchonæ, gr. ij;
Syrupi rosæ, q. s.

Divide in pilulas xxx, quarum sumat, ij—vj. secundâ quâque horâ.

Each pill contains 1-5th of a grain of cantharides.

Pills of Cantharides with Opium. H. of America.

Rx. Pulv. cantharides, gr. xvij;
Opii pulveris,
Camphoræ, ʒ ʒ gr., xxx;
Conservæ. rosæ, q. s.

Fiant pilulæ, xxxvi, quibus capiat unam vel duas omni mane.

Each pill contains grs. 1½ of cantharides, & gr. i. of opium.

[These pills have been long since recommended in the pharmacopœia chirurgica by Wilson, in certain cases of impotence. Sir Astley Cooper has combined cantharides and chio turpentine in paralysis of the bladder. The tincture of lytta is strongly recommended by Dewees, Mackintosh, and others in amenorrhœa, and leucorrhœa, the dose being increased to a drachm and a half, twice or thrice a day; but I have never known a patient bear more than one sixth of the quantity. T.]

Infusion of Cantharides. H. de la Ch.

Rx. Lini semin. ʒ ij;
Glycyrrhizæ, ʒ i.

Macera per quartem horæ, cola, et adde,
Tinct. cantharides, gutt. v.

Sumatur mistura in die.

In Cases of Paralysis of the Bladder.

The quantity of the tincture should be gradually increased, and may be carried to 60, or even 80 drops daily.

Mucilage of Cantharides. H. of Germany.

Rx. Tincturæ cantharidis, gutt. iv;
Mucil. acaciæ, ʒ iv;

Misce.

Cochleare magnum adhibeatur tertiâ quâque horâ.

In chronic Gonorrhœa, and Leucorrhœa.

A spoonful weighing 5 drachms contains 5-8ths of a grain of cantharides.

Emulsion of Cantharides. H. of Germ.

Rx. Pulv. cantharidis, gr. xx;
Amygdalæ dulcis, ʒ i;
Sacchari, ʒ p.

Tere in mortario et adjice,

Aquæ fervent, ʒ x.

Cola sumat æger cochleare magnum secundâ quâque horâ.

In the same cases as the preceding preparation.

Diuretic Potion. H. of America.

Rx. Tinct. cantharidis, ii.
Ætheris nitrosi, ʒ ʒ gutt. x;
Sacchari, ʒ i;
Aquæ menthæ, ʒ iij.

Fiat haustus, cujus capiat cochleare minimum tertia vel quarta hora.

Each spoonful contains about 3½ gutt. of the tincture, and the same quantity of nitrous æther.

EXTERNALLY. *As an epispastic.*

Emplâtre de Cantharides. P. the powder of cantharides. q. s.

[*Aphrodisiac Lozenges.*

Rx. Panacis. v. fol. pulv. ʒ v;
Vanillæ aromat. ʒ x;
Succini essentizæ, ʒ ss;
Tincturæ by litta, ʒ v;
Olei cannellæ, m l;
Sacchari purif. lbxij;
Mucilag. acaciæ, q. s.

Tere intime et divide in pastillos, gr. xxiv, ex quibus sumantur tres vel quatuor ter quaterve de die.

It is doubtful whether there are any aphrodisiac remedies; though the following have been lauded by different writers.]

We find many vegetable substances produce effects on the reproductive system of different individuals. Thus the genus of plants called *umbelliferae*, as the artichoke, celery, seeds and root of parsnip, carrot, and fennel. The *cruciferae*, as radish, turnip, water-cresses, and rockets, which were strewed at the temple of Priapus;

"Et quæ frugifero seritur vicina Priapo
Excitet ut Veneri tardos eruca maritos."

In the class *acotyledones*, the orange, mushrooms, especially the former kind, which with sweetbread were so lauded by Ovid. The French also include the *leguminous* plants—beans, especially those called French beans, which from their flatulent properties in distending the intestinal canal in the vicinity of the spermatic cords, excite the circulation in them, and thus ultimately excite the testes, inducing artificial plethora, or increased circulation of blood in these organs. We must not forget the class *gy-*

nandria-diagynia of Linnæus, the *orchis*, *ophiris*, and *satyrion*. The bulbous roots of these plants resemble the testicles, exhale a spermatic odour, which has long fixed the attention of men, and induced them to think these excited love. Linnæus states that the leaves of *orchis bifolia* render bulls more ardent and vigorous for copulation. This class is highly nutritive; and hence the bulbs may be given with sugar, or in any other convenient manner. We find, in Genesis, that Rachel married Jacob: but had no family until she ate a certain plant, when she conceived of Joseph. This plant is called *dudaim* in the Hebrew text, and is called *cucumis dudaim* by Linnæus, a species of *orchides*: of this family is also the salad, which is prepared as an article of diet, in the proportion of 3 ss to Oij of water.

The sweet fruits, as peaches, pine-apples, raspberries, &c., are styled *spermatopia*. Of all the foods, fresh eggs are the most powerful aphrodisiacs. Chaumonton praises a fresh egg and chocolate, the yolk especially, as highly nutritious and aphrodisiac; and even we have a proof afforded by analogy from the stallion, whose generative functions are wonderfully increased by the use of eggs and sweet milk. We find it recorded, that Alcimenes, an Athenian, had triumphantly made fifty women mothers in one night!!! But perhaps this demigod had taken a few poached eggs to supper. It is also stated, that crabs, lobsters, pigeons, almonds, and hazel-nuts, have wonderful influence on the genital functions, as also oysters, crayfish, and all cartilaginous fish. It has been long observed, that the Japanese, and other ichthyophagous nations, are highly prolific. There is no more prolific people than the Irish, the lower orders of whom almost wholly subsist on potatoes and fresh eggs; but we should recollect, that the greater part of our arrow-root now in use is made from the potatoe, according to Dr. Paris. (*Pharmacologia*). Phosphorus is a most powerful aphrodisiac; but cannot be exhibited, being a violent poison. Animals, to which it has been exhibited, died of the most violent and amorous convulsions. Borax has been exhibited to horses, and renders them most ardent; and that produced from sea-salt is best, which perhaps accounts for the salacity of the residents on the coasts.

In the class *aroides*, we have the *arum colocasia* of Linnæus, which is much lauded by the Egyptians; the flowers of *pathos*, or *calamus aromaticus*, by the Malays. The saffron of the Juddæ is highly praised in the *Ency. Méthodique*. The seeds and leaves of the hemp are in great reputation with the Turks and Indians, combined with musk, ambergris, and sugar. The species *amomum* are remarkably aphrodisiac; galenga, ginger, cardamom, zedoary, curcuma, and the *maranta galanga* of Linnæus, which is extolled by the Egyptians. The *miris-*

tice are also included, as pimenta, mace, canella, myrtle. The Jews caused newly-married persons to repose on the flowers of sage and marjoram; and also used embrocations of oil of *spike* (turpentine). We should not forget the ginseng, celebrated by the Chinese, the betel of the Indian, and the pepper, lauded by Tourtelle and Peyrilhe, or the opium and aromatics used by the Turks. The juniper-berries, savine, and turpentine, have been long considered aphrodisiac, all of which irritate the urethra and vaginal canal, as in leucorrhœa and gonorrhœa. Many animal substances have been praised by the ancients, as the celebrated hypomane, which was nothing but the mucus of the vagina of the mare, which excited the stallion. (*Olivier de Serres, Théâtre d'Agriculture*.) Castor, ambergris, musk, and civet, are also said to be of undoubted efficacy. Prosper Alpinus informs us, that the women in his time rubbed the genital fissure with ambergris and musk, to reconcile the good graces of their husbands, (*Med. Egypt. lib. iii. c. 15*).

There is also a species of lizard, used by the Egyptians, called by the French *scinque marin*, the yellow amber, the cricket, the ant, the spider, and lytta, which the women of Kamtschatka devour to promote fecundation. The use of cantharides ought to be banished from medicine, as it is a most violent poison, and it only causes priapism without desire, or violent strangury and inflammation of the bladder. Paré relates the case of an Abbé, who intended to be chevalier of Venus, and who had taken a dose of this drug, which produced a mortal hæmaturia. A cautious use of this medicine may, however, produce aphrodisiac effects.

The following formula is lauded by the French writers.

Essentia Regalis.

Rx. Ambre grisæ, Oij;
Moschi gran. ʒj;
Zibethi, ʒss;
Olei cannellæ,
—— lig. rhodii ā ā ʒiv;
Potassæ carbonatis, ʒiv;
Tincturæ rosarum,
—— aurant. ā ā ʒiss.

Solidis prius commixtis, dein immitantur olea, et denique tincturæ, stent in lagena bene obturata per triduum, illico coletur liquor.

Dosis mxx—xxx in syrupo ad effectum ciendum.

Certain aliments, as those already mentioned with others, and drinks, as wines, &c. and even milk, excite aphrodisiac effects. T.]

Taffetas Epispastique. P.

Pommade Epispastique Verte. P. Employed to dress blisters that are intended to keep up an active suppuration.

Pommade Epispastique Jaune. P. Em

ployed in the same cases as the preceding, but it does not contain opium.

Oil of Cantharides. P. In frictions.

Tincture. 3 i—ij in frictions.

Liniment de Cantharides Camphré. P. In frictions.

The Liniment Stimulant of the Hot. D. does not differ from this preparation.

The Pommades Epispastiques of the hospitals of Paris differ but little from those of the Codex. At the Hot. D. there is one composed of 3 i of the powder of cantharides; ʒi of lard, and 3 iss of yellow wax. That of the H. de la Ch. contains gr. xii of cantharides and of mezerion, and 3 i of lard and wax.

Epispastic Pomade with Camphor. Hot. D.

Rx. Pulv. cantharides, 3 i;

Aquæ puræ, 3 xij;

Adipis, 3 vi;

Olei olivæ,

Ceræ albæ, ā ā 3 iv;

Camphoræ, 3 ij.

Boil the cantharides with the water for half an hour, then filter and evaporate till reduced to five ounces: add the fat substances: evaporate the whole of the water: let the medicine cool, and add the camphor.

Employed to continue the suppuration of blisters, without causing too great irritation or action on the urinary organs.

Liniment of Cantharides.

Rx. Tincturæ cantharidis, 3 i;

Spiritus camphoræ, 3 ij.

Fiat linimentum.

Used in frictions on parts diseased with paralysis, and where it is necessary to cause a lively stimulation.

Ammoniacal Liniment with Cantharides. H. of Italy.

Rx. Tinct. cantharidis, gutt. xis;

Camphoræ, 3 iss;

Olei ammoniati, 3 iss.

Fiat linimentum.

Excitant Liniment of Turpentine. H. of Germany.

Rx. Tincturæ cantharidis, 3 iij;

Olei terebinthinæ, 3 i;

Liquoris ammoniæ, 3 iss.

Misce.

Cerat of Cantharides.

Rx. Pulveris cantharidis, 3 i;

Cerati cetacei, 3 j.

Misce.

Used for promoting a purulent discharge on a blistered surface.

Cataplasm of Cantharides. H. of Italy.

Rx. Pulv. cantharidis, 3 i;

Micæ panis, 3 iss;

Aceti scillæ, q. s.

Fiat linimentum.

Employed as a rubefacient.

Excitant Injection. (Swediaur).

Rx. Tinct. cantharid. 3 iij;

Aquæ puræ, Oj.

Fiat injectio.

Used for Injections into fistulæ, the cavities of abscesses, &c.

SAFFRON.

In small doses saffron excites the digestive organs: in larger ones it is a general stimulant, which appears to have a particular action on the uterus; the emanations it exhales act strongly on the nervous system. It is used with success in combating lumbar pains, which precede or accompany menstruation in certain females; frequently useful in chlorosis, hysteria, &c. Equally used as a stomachic and antispasmodic. It enters into the composition of many official preparations. [It is a popular, but useless remedy to induce the appearance of eruptions in small-pox, measles, and scarlatina, on the skin. It is rarely employed at present by medical practitioners.—T.]

INTERNALLY. Powder. Gr. xij—Ḑ i.

Infusion. 3 ss to Oij of boiling water.

Electuaire de Safran, or Confection d'Hya-
cynthe. 3 ss—i, and even more.

Tincture. P. Ḑ i—3 i.

Looch de Safran, or Looch Vert. P. A spoonful at a dose.

Sirup. P. 3 ii—3 ss.

Emmenagogue Pills. H. de la Ch.

Rx. Pulveris croci,

—— valerianæ, ā ā Ḑ i;

Oxidi ferri nigri, Ḑ ss;

Syrupi simplicis, q. s.

Fiant pilulæ xii, quarum sumat iv—vj quotidie.

Stomachic Bolus. H. de la Pit.

Rx. Pulveris croci,

—— cinchonæ, ā ā gr. vj;

Syrupi simplicis, q. s.

Fiat bolus.

Diaphoretic Electuary. H. de Lyon.

Rx. Pulv. croci, Ḑ i;

Mellis, 3 ij.

Fiat electuarium, cujus capiat cochleare min. ter quaterve in die.

Stimulating Potion.

Rx. Confectionis croci, 3 ii;

Tincturæ cinchonæ, 3 iv;

Syrupi tunicæ, 3 i.

Tere in mortario et adde,

Aquæ menthæ,

—— flor. aurantii, ā ā 3 iij.

Misce.

Cochleare magnum omni semi-hora capiendum.

Infusion of Saffron. Hot. D. et H. de la Ch.

Rx. Croci, 3 ij;

Aquæ fervent. Oij.

Macera, et cola. Hujus infusi ferventis cyathus pro dosi sumendus.

As a stomachic and emmenagogue.

It may be sweetened with syrup.

EXTERNALLY. *Infusion.* In lotions and fomentations.

Anodyne Collyrium. H. des Enf.

Rx. Croci, 3 i;
Decoct. lini fervent. 3 iv;
Liquor. opii, 3 i.

Fiat collyrium.

Employed in ophthalmia, accompanied with augmentation of the sensibility of the retina.

Anodyne Cataplasm. H. of Germ.

Rx. Pulv. croci,
Camphoræ, ā ā 3 i;
Olei hyoscyami, 3 ij.

Fiat cataplasma.

Employed to allay the pain in phlegmon.

Hæmorrhoidal Ointment. H. of Germ.

Rx. Pulv. croci, 3 i;
Camphoræ, 3 ij;
Olei hyoscyami, 3 ij;
Ung. plumb. acet. 3 vj.

Fiat unguentum.

Employed in hæmorrhoidal tumours.

SAVINE.

An energetic stimulant, which has a particular influence on the uterus, which it irritates. It is employed in cases of amenorrhœa caused by atony of the uterus, in chlorosis, hysteria, &c. As an external application, it is used as an irritant to fungous ulcers. It is rather a dangerous medicine, and not much used at the present day.

INTERNALLY. *Powder.* Gr. v—3 i twice or thrice a day in pills.

Infusion. 3 i—3 ss in Oij of boiling water.

Oil. P. Gutt. ij—x in a potion.

Emmenagogue Powder. H. of America.

Rx. Pulv. sabinæ,
—— zingiberis, ā ā 3 i;
Potassæ sulphatis, 3 ij.

Divide in chartulas vj, quarum una capiendâ bis in die.

Each packet contains gr. vj of savine.

Emmenagogue Pills.

Rx. Pulv. sabinæ,
Extract. anthemidis, ā ā 3 iss;
Oxyd. ferri nigri,
Extracti aloes, ā ā gr. xv.

Fiat massa, in pilulas gr. ii distribuenda, quarum vj capiendæ pro dosi.

In chlorosis.

Each pill contains little less than a grain of savine.

An Emmenagogue Potion. H. St. Ant.

Rx. Aquæ artemesiæ vulgaris, 3 iv;
—— florum aurantii, 3 ss;
Syrupi simplicis, 3 i;
Olei rutæ,
—— sabinæ, ā ā gutt. vj.

Fiat potio cujus sumat cochl. mag. secunda quaque horâ.

EXTERNALLY. *Powder.* Any quantity on atonic fungous ulcers.

Infusion. As lotions, fomentations, local baths, fumigations, &c.

Cerate of Savine. London.

Rx. Sabinæ foliorum recent, lb i;
Cere flavæ, lb ss;
Adipis præparatæ, lb ij.

Adipi et cere, simul liquefactis. Sabinæ folia incoque; tum per linteum exprime.

Employed as a rubefacient, and even as epispastic.

RUE.

Rue possesses the same properties as savine, only they are not so energetic. It may be used in the same cases. Some practitioners employ it as a vermifuge.

INTERNALLY. *Powder.* gr. xij—3 i in pills.

Infusion. Pinc. i—ij in Oij of boiling water.

Oil. P. Gutt. ij—x.

Emmenagogue Potion. H. de Montp.

Rx. Succu rutæ, 3 i;
Oxymelo scillæ, 3 ss.

Fiat potio cujus sumat cochl. mag. secundâ quaque horâ.

In hysterical affections.

EXTERNALLY. *Infusion.* In lotions, fomentations, &c.

Ointment of Rue.

Rx. Foliorum rutæ,
—— absinthii,
—— menthæ, ā ā 3 iij.
Adipis.

Fiat unguentum preparato, lb j.

Used as a rubefacient and an excitant.

ERGOT OF RYE.

In large doses, this substance is a very active irritant, causing serious accidents, gangrene, convulsions, &c.; in small doses it stimulates the uterus and causes contractions of that organ. It is used in tedious parturition caused by inaction of the uterus, and in hæmorrhages from atony of that organ. When it is administered to hasten labour, its use ought never to be commenced till the natural pains of parturition have ceased or are very feeble, and the os uterus is somewhat dilated.

[The ergot of rye should never be administered during labour, unless the case be natural, the pelvis capacious, and the infant's head presenting by the vertex, or the foot or feet coming down. The maximum dose is 3 iss. Spiraini, Brera, and other Italian physicians have employed this remedy as an astringent, in epistaxis, hæmoptysis, hæmatemesis, hæmaturia, &c., in doses of three grains every three hours, with success. Dr. Negri and I have not only used it in these cases, but also in leucorrhœa with the most decided effects at St. John's Hospital. We also employed it in some cases

of gonorrhœa with advantage. I am in the habit of ordering it daily at the Western Dispensary, and a numerous class of students can attest its efficacy. It is not to be procured genuine from one druggist or chemist in a hundred; and hence its apparent inefficacy. It should be preserved in closely-stopped bottles, and not exposed to air or moisture, or it speedily becomes effete. I have used it to promote uterine action in tincture, ℥ij to Oj of proof spirit in decoction 3iss in ℥vj of water, boiled down to ℥iij, in a close vessel, and seldom exceeded this quantity, given in three doses mixed with milk and sweetened, a quarter of an hour elapsing between each dose, and a longer interval if the uterine action increase. The essence of this remedy and the liquor may also be used with effect. These are, I believe, watery decoctions, and vary in strength according as they are procured from different shops, so that I am unable to state a positive dose. In my opinion, the ergot of rye is an efficient ocytotic remedy, or possesses the power of exciting parturient action at any period of utero-gestation. I feel convinced that it only fails when effete; and I could mention several instances in proof of this statement. A single dose of the decoction has roused uterine action; and then the rest should be left to nature. The practical obstetrician is well aware of the fact, that the parturient action may suddenly increase, without any remedy, after an absence of hours, and terminate the function of parturition very rapidly. He will therefore be content with one or two doses of this remedy when labour pains increase, and leave the rest to nature. He also knows that there is a great danger of hæmorrhage in slow and lingering labour, on account of the want of uterine contraction after the birth of the infant; but a judicious use of the ergot will prevent this dangerous and often fatal occurrence. It will effect this by a contraction of the uterus and the expulsion of the placenta. If given prematurely, or in full doses, it will excite a powerful uterine contraction, impel the head of the fœtus against the undilated or rigid parts of the genital aperture, and destroy the infant. The scientific obstetrician who has watched Nature, knows that the genital aperture is slowly and gradually dilated by the pressure of the infant's head during each labour pain, and, consequently, that it would be wrong to anticipate or force the process of nature by an injudicious exhibition of any remedy, or under any circumstances. It is scarcely necessary to observe, that the premature administration of the ergot, before the infant's head has descended into the cavity of the pelvis, or before the presenting part of the infant can be ascertained, would be rash and dangerous practice. The presentation, to use the obstetric term, might be transverse, the infant might be across, and exciting powerful parturient ac-

tion in such cases, would be followed by the destruction of the life of the infant, or rupture of the uterus, which is a most dangerous disease at all times, and most commonly destructive to the woman. The medicine should never be given before the labour is advanced, and its nature ascertained. It would be destructive to the lives of the parent and offspring, if the former were so deformed that the latter could not be born without instrumental aid; and yet a writer in one of the periodicals declaims against the remedy, because it did not effect delivery in two cases of highly deformed pelvis. As a general rule, the medicine ought not to be given unless the outlet of the pelvis is unobstructed by bony or soft tumours, and the head or feet of the infant the presenting parts. In a case of placental presentation, to which I was called by Mr. Austin, of Red Lion-street, Clerkenwell, to perform transfusion, I found the lady in a dying condition. I gave her repeated quantities of brandy and the essence of the secale cornutum, as there was no uterine action. She revived, and I proceeded to deliver her by version or turning, having previously explained to her husband that she might die during the operation, or that transfusion might be necessary. I succeeded in bringing down the feet, the brandy and ergot were freely repeated, uterine action came on, the infant was extracted, the placenta was removed, the uterus firmly contracted, there was no hæmorrhage, and the patient did well. The operation was not commenced for some minutes after a double dose of the ergot; and as soon as the head was in the uterus the medicine was repeated. The ordinary dose would have been useless in this case, so prostrate were the vital powers until roused by brandy. The object was to excite uterine action as soon as the head was in the uterus, and was fortunately accomplished. T.]

INTERNALLY. *Powder.* Grs. x—xxx in ℥vi of a proper vehicle.

Decoction and Infusion. Grs. xx—xc, and even more, in Oss of water.

A spoonful should be given every ten minutes.

Decoction of the Ergot of Rye. H. of Germ.

Rx. Secalis cornuti, ℥i;
Aque, Ojss.

Décoque ad Oij et cola cochleare magnum adhibeatur quartâ parte horæ.

Potion Ocytique. H. de Mont.

Rx. Pulv. secalis cornuti, 3i
Liquoris opii, gut. xx;
Syrupi simplicis, ℥iij;
Olei bergamotti, q. s.

Fiat potio cujus sumat cochleare magnum omni semi horâ.

[*Anti-hæmorrhagic Powders.* (Ryan.)

Rx. Secalis cornuti, 3 ss;
 Pulv. cinnam. comp. ℥ss;
 Sacchari purific. 3 ss.

In chartulas x divide, quarum capiat unam, singulis, secundis vel tertiis horis

In active hæmorrhages from the nose, lungs, stomach, bowels, vagina, uterus, and bladder, one of these powders may be given every quarter or half hour, until the bleeding is diminished or suppressed. One three or four times a day will frequently suppress simple leucorrhœa or gleet. In the two last cases, if the medicine fail, I combine it as follows.

Rx. Pulv. secalis cornuti, ℥ij;
 ——— cubebæ, 3 j;
 ——— cinnam. c. 3 ss.
 Sanhari purif. 3 j.

In chartulas viij distribue sumat unam ter quaterve in die.

The essence, liquor, tincture, and decoction may be combined with those of cubebs, buchu, and copaiba added in obstinate cases. T.]

(To be continued).

—o—

Rebistering.

The Nature of Cholera Investigated. By John George French, formerly Surgeon to the St. James' Cholera Hospital. Rivington. 1835.

THOUGH cholera has for the present shrouded its death-compelling form in the mists of causality, which medical authors have in vain attempted to penetrate, and no longer comes "to vex the nations," it is by no means a consequence that the inquiries of the physician into the nature of the scourge that *has been*, should relax. On the contrary, we think that now, when the accumulation of facts is so great; now, when the excitement of imminent devastation is past, and coolness allowed to weigh the question in the balances of reason, now is the period for the erection and enunciation of those doctrines for which former experience may have afforded a foundation.

Though therefore, with the many, cholera may have ceased to be matter of reflection, or of vulgar interest, we should not consider that we were doing our duty as journalists were we to pass over either the voluminous monographs or the diminutive brochures on the subject, which spring into print in these "piping times" of safety. This pamphlet of Mr. French is the second on the same

subject published by that gentleman, the former having appeared in 1832. In that he endeavoured to establish that the process which supersedes that of digestion and leads to the secretion and excretion of a vast quantity of fluid from the digestive surface, and thus to an increased viscosity of the blood, rendering its circulation more difficult;—that this process constituted the disease. In the present work he goes on the ground, that in the origin of cholera the heart becomes palsied by the impression of some poison, and that which we commonly call the symptoms of the disease are collectively the salutary efforts of nature to remedy the mischief caused by the incapability of the heart to transmit blood. Thus, if the blood remain fluid, it will continue to pass to the heart, which is incapable of duly transmitting it; nature therefore opens an immense surface, whence the fluid parts of the blood may be poured out, and the latter left in a condition less fit for circulation: by this means time and rest are allowed to the great circulatory muscle to recover itself. But while nature is thus, on the one hand, giving time for recovery to the heart, the act of vomiting is providing that the viscid blood in the vessels shall not be utterly stagnant: vomiting, therefore, besides assisting in carrying off a quantity of fluid, also acts a good part in mechanically propelling the blood, and *gradually*, as the heart recovers, restoring the circulation. "The absence of bile," Mr. French continues, "is owing to its inutility in the process going on, opposed as this last is to the healthy digestion. The urine, too, is scanty, because its constituents are already being carried off by the digestive surface." These are the *pathognomonic* symptoms of cholera, and Mr. French was by no means called upon to account for the thirst, cramps, altered voice, cold surface, oppressed respiration, &c., &c.: these occur in many other diseases, and cholera may kill without many of them.

The result of the above doctrine is a treatment founded on the indications of nature, namely the relief to the heart in the first instance, and the re-liquefaction of the blood in the second. Bleeding answers the first, and dilution with cold water the second—a treatment in the judiciousness of which we perfectly agree with Mr. French.

Such is the sketch of Mr. French's pamphlet. We leave it to our readers to compare its statements with their own experience, and pronounce accordingly.

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Transactions of the Medico-Botanical Society of London, for 1832 and 1833.

THE ten papers which occupy the pages of this publication, each and all contain original and interesting matter. In the first, Dr. Rousseau treats of the medical properties of the holly and ilicine—the latter being the active principle of the former, and extracted from the decoction of the leaves by a process resembling that by which the other vegetable alkalies are obtained. Holly leaves are given in decoction (half an ounce to 8 or 10 oz. of water boiled to one-half, the whole to be taken two hours before the fit); in substance, (one or two drachms macerated in white wine for twelve hours, and taken as the last); in extract, (one-half to one drachm in pill); as ilicine, (in doses of six, eight, eighteen, or twenty-four grains, continued till the disease is subdued); as injection, (one ounce of leaves boiled for a quarter of an hour, in water sufficient for injection). Numerous cases are related, but they do not seem to shew that ilicine may be confidently used as a substitute for quinine.

The "Ancient Plants of Egypt" form a very pleasing article, by M. Bonastie, a corresponding member of the Society.

Not less so is the "Account of the Chiritmanos of Peru, and the Medicines sold by them." These Chiritmanos are travelling doctors, and by birth Indians of Upper Peru, or Bolivia. The writer of the article, W. Bollaert, Esq., says, that the medicines they carry with them do little harm or good, though some may have properties to recommend them, if skilfully administered. The following is a list of most of them and of their uses:—

"*Jaco*: bole, principally of oxide of iron.

"*Salvia*: good for the *ayre*; this is a term for a cold. The substance is either taken in decoction, or the leaves moistened with saliva, and applied to the temples. It is a species of sage.

"*Youruma*: bark of a tree, powdered, and taken as snuff in headach.

"*Piedra Biscal*: this seems to be some inert earthy body: it is directed to be ground, and taken in warm water for the heartburn,

"*Quena Quena*: seeds seemingly of a species of *Annona*: decoction of it used in headachs and tercianas, or agues.

"*Contrayerva*: a species of *Dorstenia*: infusion in water given in pains of the stomach.

"*Chacaire*: given in pains of the sides; powdered, and taken in warm water. This is the excrement of a bird called Coco.

"*Suelda con Suelda*: ground into powder, and then fried in fat, made into plasters for broken bones. It takes its name from the Spanish word *soldar*, to mend or solder.

"*Huachanca*: from a species of *convolvulus*, probably *Jalapa*, is used as a purgative. The dose is marked in the specimen.

"*Corro*, or *Curru*: powdered, and mixed with fat and urine, used to rub the bones when painful. Seems to be the seeds in the seed vessels of a species of the *Helicteres*, or screw tree.

"*Charna*: some little sticks, mixed at times with the above. (It accompanies the foregoing).

"*Venal*: for bad eyes: the leaf is chewed, and the eyes anointed with the saliva. The bad eyes, during the operation, must be placed looking at the sun.

"*Colquemillo*: this is alum; used in itch or pimples on the skin: the parts affected first washed with urine, and then the alum, in fine powder sprinkled over them.

"*Chuuchemuntana*: for heartburn.

"*Ymale*: for jaundice, powdered, and taken in water. Seems to be a species of *Veratrum*.

"*Raiz de la China*, or Chinese root; used in gonorrhœa, likewise when the menses do not flow regularly: given as a decoction.

"*San Juanillo*, or St. John; an agreeable bitter, chewed for toothach.

"*Ointment of St. Peter*: wax, grease, &c. The Chiritmanos say several rare herbs enter into its composition.

"*Aceite de Maria*, or Mary's oil: a small quantity, used as a plaster, applied to the navel of females, during childbirth, to give easy labour.

"*Cebo de Utrunco*: fat of a wild animal called the Utrunco, rubbed round the waist of women in labour: said to facilitate it.

"*Parches*: patches or plasters: these are of various materials, but principally of leaves of favourite plants; sometimes the Coca, Ivy, Venal, &c. These are moistened with saliva, and applied to the temples in headachs, &c. At times some ointments are prepared from the leaves with fat and wax.

"*Charms*: these are of various descriptions, such as the false nutmeg, *Tairuvies*, small red berries; another, a large black seed. These worn, prevent people from colds and coughs. Loadstone, if worn by either sex, ensures the love of those they are attached to; said likewise to attract lovers. Another property is attributed to this substance, that of keeping evil spirits from the wearer. There

are other charms against witches, ghosts, &c.; some against poison likewise.

"Clysters are recommended in cases of stoppage in the bowels, but of such dirty and useless substances that they need not be mentioned here."

The Chiritmanos bleed with a bit of glass fixed into a chip of wood; the operation is performed in a manner something resembling bleeding with a fleam.

Professor Burnett's "Inaugural Address," is an eloquent exposé of the useful purposes of the Society in question, and of the extensive applications of vegetable nature to medicinal purposes.

The last paper, on the "Medical Plants mentioned by Shakspeare," is from the pen of Samuel Rootsey, Esq., and is an "elegant extract" of those passages of our great bard, in which reference is made to botanical emblems of the softer or fiercer passions, or in which natural descriptions of flowers and plants are given, in language such as none but Shakspeare could utter. We dare not attempt to quote one passage as more beautifully appropriate or true than another, in the fear that we should find ourselves gradually and instinctively transferring the whole of them to our pages. Suffice it that we state the whole should be read in the Transactions.

This is a most instructive little volume, and the style is not more prominent than the *dulce* throughout.

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The London Medical

AND

Surgical Journal.

Saturday, March 21st, 1835.

CLINICAL INSTRUCTION IN OUR HOSPITALS.

Hæc ego non credam Venusinâ digna lucernâ?

Hæc ego non agitem?

Juvenal, Sat. 1. 51.

We have more than once adverted to the miserable want of true clinical instruction in which the students of our medical schools stand. The remark is more particularly applicable to those who seek their professional education in this metropolis. It may perhaps be thought unnecessary for us to enter into an argument to prove that the fault of

this is altogether attributable to the *professing* teachers of clinique. We may however be pardoned if we shew such to be the case, by merely stating what the student proposes to gain by clinical attendance at the hospitals, and what he actually does gain.

When the period for hospital attendance arrives, the student is presumed to—and indeed according to the regulations issued by the Apothecaries' Company must—have already collected in the store-house of his memory, those practical precepts which the *bonâ fide* experience, and recorded reflections of writers, have enabled him to gather from books, and those which oral lectures have in some degree made more familiar to him; for the impression of a personal communication of facts, though these be more meagre, and the arrangement [of them less perfect, is, nevertheless, made in stronger characters on the intellect, than are the black and white truths of a printed page. But the student looks for, and requires further familiarization with disease. Primed with "book learning," he expects to find in an hospital those numerous opportunities of applying it, which the enormous fee he has paid certainly entitles him to demand. And when we say "apply," we mean the actual, personal comparison of what he has read, with what he sees in the hospital patient. Now this application supposes a free and unlimited audience of all the *professing* teacher addresses to, hears from, and thinks of the patient and his case. That the student should obtain this, the teacher should have the power and willingness to arrange his mode of examination, and to repeat it if necessary to the student; he should possess the very unfashionable patience to listen to the pauper sick man; for though he may be quick-witted enough to understand without hearing the whole of the symptoms, the surrounding students possibly may not; and he should have the reflective strength which shall

draw a sound inference from a train of facts, as also the happy property of communicating it; moreover it should be necessary that the lecture should either be delivered at the bed-side—or that the time of examination should be prolonged, so as to afford the student space to make notes that would assist him in recognising the case when alluded to (if it ever be so), in the distant lecture room. It would be also essential to the student's progress that he should have the opportunity of putting questions, and conveying to the teacher his ideas upon any given case; by this means his thinking propensities would be fostered, and his errors of judgment probably rectified. Were all this granted to the student, as it indubitably ought to be, his clinical instruction would no longer be a mere *vox*, his "walking the hospitals" (the fond phrase of many a fond parent when his son starts for London) a mere lounge, his payment of fees a mere robbery, and his quantum of improvement a mere *nihil*. We should gradually cease to see the grossly bad observers of disease who, never having had the lesson when young how to become so, grow old in the ignorance of their ways, incapable of appreciating, incapable of communicating even the scanty facts that may have been thrust upon them by repetition. But little do these hospital teachers think of or care for the invaluable gift of sound clinical instruction.

Patience and capability are therefore essentially requisite in the clinical teacher. Do we find them in this man, who chooses his own hour for visiting the hospital, whether it suits the student or the patient's disease, or not? In this other, who comes odoriferous and dapper from the boudoir of the nervous lady—and just pops in *en passant* to see how the *people* at the hospital are getting on? In a third, who scorns the student and the patient alike, considering the weight of "hospital physician" to his

name as the only thing about the office worth the having? And lastly, in a fourth,

"Whom *learning's* face ne'er favour'd with a smile,"

and who, without half an idea in his own possession, cannot, by rule of arithmetic, give one to his pupils? The Gazette has challenged the exclaimers against the hospitals to point out individuals and instances in confirmation of their assertions and opinions; *it were easy to do this*; but the Gazette knows well that there is a libel-law which makes the publication of the greater truth the greater libel, and not improbably the very writer of the challenge in question would be one on whom we should fall foul, and who in return would fall foul on us with this law in his hand. *Au reste*, let the Gazette or any other stickler for luxuriant abuse endeavour to find in the traits of the four characters above included in as many notes of interrogation, the counterparts of some of our hospital physicians.

But to return; patience and capability as displayed in the details already mentioned, are the requisites for a clinical teacher who shall do justice to the clinical student. "But," we hear some one say, "if all this were required and enforced, who would be an hospital physician?" In like spirit did the first prelate of the realm maintain that if bishoprics were reduced to a sum under £4,500, no *gentleman* would have the ambition to undertake them. Fortunately in neither case do we want *gentlemen* in the *pecuniary* weight of the term, and the *idle* acceptance of the office; we want none of the "*fruges consumere nati*" for what should be posts of activity. For ourselves, we have no alarms on the subject, and are perfectly ready to leave such a dreadful contingency to Providence, in the certainty that physicians able to undertake the *active* duties of clinical teachers, are a genus the species of which will

never fail. In enforcing the attention of the physician to the patients and the students, you do nothing that degrades him, and therefore nothing that should prevent one of gentleman-like habits and education from accepting the office. On the contrary, it would be hard to find any thing more low, contemptible, and ungentleman-like, than the acceptance of an office, and the duties of it, without any previous intention or subsequent willingness to perform them. Away then with the stuff and nonsense about professional degradation.

There are two ways of remedying the evil we denounce; one is by operating on the teachers, through the medium of those who elect them; the second by operating on them through the medium of those whom they profess to teach. The former would be the preferable mode, and therefore—so well is the whole system of hospitals arranged—the least practicable. Nothing would be more effectual in bringing their honorary officers to order, than the exercise, on the part of the governors, trustees, or whatever else they may be, of the hospitals, of judgment and mature reflection in their choice; and after choosing them, to enforce conditions having reference to the patients and the students, conditions on the fulfilment of which their tenure of the office should depend. It is true that the tenure at present is nominally *dum bene se gesserit*; but who is to judge of the *bene*? The governors, &c. do not please to interfere. And this leads us to the second mode or remedy.

We say then let the students sit in judgment on their clinical teachers; let them weigh their capabilities with their own educational wants; let them be swayed by no choice of locality, no predilection for this or that end of the town in their election of clinical teachers; let them patronise those who patronise them, who consider their progress of some consequence (for none

that we know consider it of *great* consequence), and who are therefore comparatively the most worthy to receive their money. Were this system of exclusive dealing acted upon, we might still hope for some amelioration in the condition of the fleeced student, and some improvement in the manners of the fleecing hospital physicians.

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On the Various Modes of applying Water, and the Beneficial Results to be Derived from its Use in Surgical Practice.

To the Editor of the Original London Medical and Surgical Journal.

SIR—I am induced to offer a few observations, through the medium of your valuable Journal, on the above subject, in consequence of having seen an application called *water dressing*, made use of at the hospital attached to the London University, by the justly celebrated and scientific surgeon, Mr. Liston. I have used it for many years in my own practice, and have every reason to prefer it to any other mode of surgical treatment: indeed, in many cases which I could relate, the reparative process under the influence of its application, has been so much greater than we usually observe, that in less enlightened times it might be deemed as bordering on the miraculous. The knowledge of the therapeutic effects of water, the principles on which it should be applied, and the different ways of applying it, I obtained from the precepts and practice of Dr. Macartney, when at Trinity College, Dublin. Having met but few who are aware of the benefits to be derived from its use, I am naturally desirous to communicate a sketch of its history and properties—short, indeed, but, I trust, sufficiently intelligible and emphatic to induce my brother practitioners to try it, and convince themselves, by the essay, that it is deserving of their—as I have found it of my—preference.

I remain,

Your obedient Servant,

JAMES WILSON.

1, Kingsland Road.

The application of water as a remedy, both locally and generally, together with the miraculous cures resulting from its use, is of very ancient date. It is said to have been used at the siege of Troy by Patroclus, and throughout Greece by the Priests of Æsculapius. Hippocrates also habitually used water as a local remedy, his mode of application being a wet sponge constantly laid to the part. It was probably the mere physical effects of water that were exercised in the cure of Nahaman the Syrian, when he was ordered by the prophet Elias to go and wash seven times in Jordan. Among

the Arabians water was a most frequent remedy; but previous to being used, it was charmed by the immersion in it of their prophet Mahomet. (Might this usage have given to Scott the idea of the talisman which he makes the Hakim introduce into the cup of "what appeared to be pure spring water?") Ambrose Paré inquired into the advantages to be derived from the use of water, and tried it at the Hôtel Dieu: but he did not continue its use, and for a curious reason. Paré was a most pious and, unfortunately, superstitious man. Thus when he discovered the use of the ligature, he considered it sufficiently wonderful to be called a revelation specially made to himself. Thus, too, when beholding the wonderful cures effected by water, he deemed it nothing less than a miraculous remedy, and, consequently, unlawful for mortals to deal withal: he, therefore, abandoned the use of it! In more recent times, Baron Larrey used it while in Egypt: he was induced to do so from hearing that the water of the Nile was blessed with curative virtues—so prone are we to the wonderful, so unwilling to believe that great effects can proceed from simple causes!

These facts shew that water is a very ancient remedy. Acting as it did, or was supposed to do, under the secretly benign influence of some charm or priestly blessing, it, no doubt, produced benefit by the double impression on the mind and the body. But reason may teach us that the happy results could not have been so frequently obtained, or to such extent, as if it had been accompanied with a knowledge of the principles of its application, and more or less acquaintance with its *modus operandi*. To these principles, and to this *modus*, I shall now address myself.

In surgical dressing, by this method, a piece of fine lint is to be moistened in water and applied in a double fold, so as completely to cover the affected part. Over this a piece of oiled silk, somewhat larger than the lint, is to be placed. The lint will, of course, require to be changed occasionally, otherwise the secretion of the part will become mixed with the application, and prove, in many cases, irritating and hurtful. The oiled silk is essential, in order to the prevention of the evaporation of the water, and, by the retention of a vapour, to the maintenance of the parts in a state of moisture and in an uniform temperature.

It may be said that these indications are fulfilled by a warm poultice; and it is so far correct to say, that nothing but the vapour from it is beneficial in effect: for the bread, flour, or meal, as it may be, is only useful in holding or detaining the water and its vapour. But, on the other hand, we have the inconveniences of its size and weight, together with the tendency to decomposition after any lengthened application—circumstances which certainly withdraw from its

utility, if they do not actually render it an irritant to the part. Every one is well aware how much the nature of a poultice is changed after being kept for a whole night on a diseased part. Now these disadvantages are, in a great measure, avoided by the water-dressing, which, moreover, possesses the advantages of simplicity, cleanliness, &c.

With regard to the principles on which the application of water-dressing is made, they are referable to the removal of the affected parts from all external impressions, and to place in the most pleasing situation, that is, to the production of that state where the sense of injury is diminished, and to the withdrawing of every thing that can interfere with the operations and endeavours of nature towards a cure. The temperature being always equal, and every source of restraint and external irritation absent, the disposition in the body violently to resist all sudden changes, and to become irritable under sense of injury, is diminished. To shew this, it is only necessary to recal the fact, that the arteries always sympathise with the sentient extremities of the nerves, and that impressions primarily made on the latter are transmitted to the former.

Granulations will spring up in chronic ulcers, under the application of water-dressing, or warm steam, when other means have failed; should the granulations be too luxuriant, the removal of the oiled silk will suffice to reduce them without the aid of an escharotic. *Cicatrizatio*n quickly takes place, and is never followed by a morbid cicatrix. In such cases the water may be used at various temperatures, the sensibility of the part soon choosing that which best agrees with it.

In recent wounds cold water is useful in restraining hæmorrhage, and preventing the occurrence of inflammation, and this more particularly in cases where there is not much injury to sensibility, and when reaction is to be moderated; for it should be remembered that irritation ever interferes with the reparative process: it is by allaying such irritation that the gradually warmed vapour acts. The application to piles of a piece of sponge moistened in water and covered with oiled silk, produces a soothing effect, which no one would credit who had not experienced or observed it. Wounds of all kinds are also benefited by water of various temperatures, and the inflammation and suppuration—processes very hurtful to the act of healing, though vulgarly considered necessary to that act—restrained.

On a future occasion I hope to pursue this subject, and to illustrate it with some cases.

Hospital Reports.

NORTH LONDON HOSPITAL.

New Instrument for Stammering.

DR. ELLIOTSON made some remarks, on Thursday last, on stammering. He said that there were various opinions as to the seat of the disease—some supposing the muscles of the glottis to be affected, others the muscles of the tongue. Dr. Bostock published a case in one of the journals, some years since, which he had cured by purgatives: this was most probably a case depending on a fulness of blood in the head, or disorder of the digestive function—some gentleman had cured the disease by giving the persons more confidence in themselves, and instructing them to take a true inspiration before speaking, and to speak deliberately; there is no doubt the mind has great influence on the muscles connected with articulation, as well as the other muscles of the body. In St. Peter's Dance, if you come suddenly near a patient, so as to take him by surprise, the symptoms are aggravated, and the emotions of the mind act on the speech in something of the same manner. The Doctor then introduced to the class a youth who had been treated for this disease in a novel manner by a Mr. Metz.

It appeared that Mr. Metz had befriended a Polish gentleman, who had since gone to America; previously to his going, he wished to repay Mr. M. in some way for his kindness, and presented him with a small silver instrument, which he said had proved a great source of profit and fame to him on the continent, as it had cured a great number of persons of stammering. This instrument, acting as a support to the tongue, kept it steady. The instrument being hung to the teeth by means of three hooks, prevent it from moving about. When Dr. E. first heard of the instrument, he was inclined to treat it as a piece of nonsense, but when he was informed of the principle on which it acted, he thought the plan good, and worthy of a trial. He instanced the circumstance of resting one foot on the toe whilst sitting, being attended with a tremulous motion of the limb; but place the whole foot on the ground and the limb becomes firm and steady; it was reflecting on this fact that led him to think the principle a good one; but he believed there were other muscles besides those of the tongue concerned in impediment of speech. Dr. Arnott, in his *Elements of Physics*, had mentioned that the muscles of the glottis were agitated in a case he saw—therefore one mechanical remedy would not be applicable in all cases.

The youth present, on whom Mr. Metz had tried the instrument with so much benefit, had stuttered from the age of six years—he is now fourteen. He was always

at home with his father, who also stuttered. Dr. Elliotson remarked, that stuttering is a hereditary disease, coming on at a certain time of life, in the same manner as gout, epilepsy, &c. The instrument had been applied for seven weeks past, but, in consequence of the youth being at a boarding-school, Mr. Metz says he was much neglected, and only practised the remedy two hours a day. The patient now read a passage from a newspaper without the instrument being applied—he stuttered considerably: he afterwards read with the instrument—the difference was not, however, very decided, though, on the whole, he read better. Dr. E. said he could not decide on the merits of the instrument until he had seen more of it. Mr. Metz agreed to bring his patient again in three weeks' time.

Dr. E. then referred to the case of James Davis, 50, who is at present under treatment for periostitis. The patient, on his admission to the hospital in the beginning of February, had great pain and swelling of the periosteum in different parts of the body: the pain and redness increased always towards night: being syphilitic, mercury was administered until the gums were slightly affected: the symptoms remained the same, except that the pains at night ceased. The hydriodate of potash was now given in small quantities, of a solution containing 3i of the hydriodate to ʒi of distilled water. He took ʒss doses twice or thrice a day: in two or three days the dose was increased to ʒij. He has continued this since the 14th of February, and is now quite recovered: the effect was very decisive, even in three days. Dr. E. had seen his medicine very advantageously employed in cases of indurated lungs with effusion; he had seen quarts of serum removed, and the organs again become healthy. He had employed it in the case of James Reids, 45, now in the hospital, on his admission on the 12th of December last. He had extreme difficulty of breathing, swelling of the legs, and scanty high-coloured urine; inability to lie down, and was obliged to be supported by pillows in nearly an upright position. Dr. E. was led to believe the lungs in this case were solidified, from his not being able to hear any respiratory murmur at the roots of the lungs near the spine. Laennec says, in cases where there is only water in the pleura, you can. In this case there was some fluid; he heard egophony, which he could not have heard had the chest been quite full; therefore, in cases where you hear this sound the chest does not contain a large quantity of water. In this instance there was effusion into the cellular membrane of all the limbs and abdomen: being too weak for bleeding, the H. of P. was given to him, with other diuretics; this, however, seemed to do no good; the hydriodate of potash was persevered in, and the man is fast recovering; and, instead of

wearing the gloomy looks he lately did on the approach of the doctor, as if he thought himself beyond the power of medicine, he is now the Joe Miller of the ward. The medicine was assisted by letting off the fluid mechanically, as diuretics then act more powerfully. Dr. E. had never seen danger from acupuncture of the thighs—you may make a dozen openings there—but there is always danger below the knee. He has often punctured the external parts of generation—there is no danger in such a proceeding—you can puncture every day if the water ceases to flow, but generally there is a discharge kept up for several days. He should also state, that in the arm he never practises acupuncture below the elbow.

The patient above had an ointment composed of the following, rubbed on the abdominal parietes:—

Iodine, \mathfrak{J} i; Cerat. \mathfrak{z} i.

As much as \mathfrak{J} ivss of the hydriodate of potash mixture had been given at once, but as it disagreed with the stomach it was diminished to \mathfrak{J} ii. This medicine may be given to a large extent, but the smaller the doses the better, if effectual. If it purges, you can give astringents and opium; or if purging continues, and it affects the hydriodate, diminish the dose.

It is curious that some persons cannot take two drops of this medicine, while others can take a very large quantity. Dr. E. had seen it of benefit in paralysis and inflammation of the neurilema.

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Foreign Medicine.

Vicarious Menstruation by the Lungs.

N——, aged 32 years, fell into a pond, two years ago, when menstruating; the menses were immediately suppressed, and a copious hæmoptysis supplied the place of them, and became strictly periodical. Fifteen months ago she became pregnant, and during the whole of her pregnancy, during her confinement, and all the time of suckling, no spitting of blood occurred; but immediately on her weaning the child it returned.—*Hufeland's Journal der Practischen Heilkunde.*

Preserved Milk—Lactoline.

M. Grimaud has lately succeeded in making a preparation which he calls *lactoline*, and which, mixed with nine-tenths of water, produces the precise composition of fresh milk, the flavour of which it also has. He says it may be preserved for an indefinite period without undergoing change from humidity or heat.

M. Grimaud further observes that M. Braconnot had already endeavoured to make a conserve of milk, in which the latter was reduced to a sixth of its volume; but his process, which is grounded on the coagulation

of milk by acids, on the one hand deprives the milk of the major part of its salts, and among these of the sugar of milk, whilst on the other hand it adds a quantity of sub-carbonate of potass in order to render the coagulum soluble. Such a preparation in this manner is found to differ exceedingly from milk, nor does it retain the flavour of it.

The new mode of preparation is due to M. Gallais, a chocolate manufacturer. It consists in withdrawing the aqueous parts of the milk by evaporation—not with heat, for some change always takes place, let the fire be ever so carefully managed—but by exposing, by successive agitations, all the fluids to cold air.

M. Grimaud also ascertained that the globules of milk still remained unchanged in lactoline. “Hitherto,” he concludes, “milk has only given origin to butter and cheese; but lactoline constitutes a third product, at once pleasant and wholesome.”—*Gazette Médicale*

Fœtus vomited by a Child Three Years Old.

Joannes Vouros, physician in chief of the department of the Cyclades, (Greece), in a letter addressed to M. Poulo, and which the latter translated to the Académie des Sciences at one of its recent sittings, relates that he lately met with a male child, three years and a half old, who had for some time been labouring under worm fever. In the night of the 26th of October, 1834, after several fits of vomiting, the boy at length ejected a human embryo: that it was one, M. Vouros is certain, and the police, who suspected some fraud, were invited to inspect and make inquiries concerning it, which ended in their conviction of the fact.

After M. Poulo, had read the above letter, M. Geoffroy Saint-Hilaire communicated the following circumstance. M. Giraudet, a medical man of Cusset, near Vichy, observed a similar case in the month of June last. “I happened to be on the spot,” says M. G. Saint-Hilaire, “and immediately inspected the vomited mass, and after preserving it in spirits, I subsequently examined it with M. Milne Edwards; it proved to be an abortion without any marked specific organs.”—*Gazette Médicale, February.*

Relative Weights of sound and diseased Bones.

In all phlegmasiæ of the medulla of the bones the latter in a short time lose in weight, by the predominance of the organic matter over the earthy; and the thickness of the bony varieties of the medullary canal diminishes by one, or three quarters of, a line. The compact substance seems to become spongy, and when the inflammation has run its course, the spongy substance of the extremity of the bone has itself disappeared in a greater or smaller degree. If the bones are emptied of the marrow and dried, the continuous medul-

lary cavity causes them to bear some resemblance to the leg bones of those large birds that walk more than they fly. M. Dubreuil (*Journ. Hebd. Nov. 1834*), has made some curious experiments on this diminution in the weight of diseased bones. In four individuals who had died at various periods of time after amputation of the thigh, he weighed portions of the diseased femur—six or eight inches long—and similar quantities of sound femur, sawed off at the same height of the bone. He found the first diseased femur to weigh four ounces, two drachms; the sound, eleven ounces, four drachms: the second diseased piece, six ounces; the sound, twelve ounces four drachms: the third diseased, four ounces, two drachms; sound, eleven ounces, six drachms: the fourth diseased, seven ounces, two drachms; sound, eleven ounces, two drachms. This diminution of weight is sometimes exceeded; in a case of *fragilitas ossium*, Saillant relates that the patient floated in the bath, and that two persons were required to keep the body under the water.

It is worthy of remark, that these pathological phenomena are the exact representation of the state commonly regarded as that of old mens' bones. The remark had been made by M. Malgaigne in reference to the inflammation of the spongy tissue of bones; but M. Dubreuil is the first who has marked this analogy in reference to the dicophysis and the long medullary canals. He was at first inclined to consider these alterations as the consequences of phlebitis or arteritis. M. Blandin says he found the veins of the marrow affected with phlebitis in six instances; but M. Dubreuil's researches into medullary inflammation of the bones, do not lead him to coincide in this opinion.—*Journ. Hebdomadaire*.

Erectile Tumour with a Bony Nucleus.

M. Lisfranc lately shewed the Academie de Medecine an erectile tumour, which he had taken from a young man twenty-four years old. It had only been two months in growing, was situated on the face, and was only the size of the tip of the little finger. But what rendered it remarkable was, that it included a concretion of the size of a hemp-seed, and was bony in nature. The tumour was seated altogether in the cellular tissue.

M. Lisfranc incidentally remarked, that, in operating on nævi, unless at least two lines of the surrounding sound tissue was taken away, the nævus almost always re-appeared in the cicatrix, in part or altogether. He applies the same principle to all erectile tumours, unless the locality fails to allow of it.

Opium and Saliva.

M. Texier, in his late account of the culture and gathering of opium, addressed to the Academie de Medecine, (March 3rd, 1835), says, that after the flowing of the poppy juice and some evaporation, it appears as a grumous and glutinous jelly, which is placed in earthen vessels: *it is then pounded with spittle*. M. Texier asked them, why they did not take the trouble of using water: they answered, that it would spoil the product!!

Dupuytren's Pommade to prevent Hair from falling.

Macerate a drachm of powdered cantharides in an ounce of spirits of wine, and filter. Take ten parts of this tincture and rub it in a mortar with ninety-parts of cold lard.

Death of Foderè.

This celebrated medical jurist and learned writer on epidemics, died at Strasbourg in the middle of last month.

WEEKLY METEOROLOGICAL JOURNAL.

1835.	Moon.	Thermom.			Barometer.		De Luc's Hygrometer		Winds.		Atmospheric Variations.		
Mar.													
12	○	47	50	36	29.51	29.51	62	59	S.	N.	Cloudy	Fine	Rain
13		47	49	42	29.91	29.98	59	58	N.W.	W.S.W.	Fine	Fine	Fine
14		45	53	45	29.73	29.81	58	57	S.	S.W.	Rain	—	—
15		46	54	40	29.60	29.62	57	53	S.S.W.	W.	—	Rain	—
16		50	51	45	29.80	29.81	53	54	W.	W.	Fine	Fine	—
17		47	49	40	29.60	29.53	54	58	S.	W.	Rain	Rain	Rain
18		44	50	36	29.74	29.87	58	57	N.	N.N.E.	Fine	Fine	Fine

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WILLIAM HARRIS and Co.

Advertisements should be forwarded before the afternoon of Thursday; all books for review on Wednesday; and all communications on Monday, if intended to appear in the ensuing number.

THE

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SATURDAY, MARCH 28, 1835.

VOL. VII.

LECTURES
ON
MEDICAL JURISPRUDENCE,
DELIVERED BY PROFESSOR A. T. THOMSON,
F. L. S.,
At the University of London; Session 1834-35.
LECTURE XXII.

GENTLEMEN—A frequent consequence of melancholia is *dementia*, or fatuity. It is difficult to distinguish it from *amentia*, imbecility, or idiotism; and yet, in a medico-legal point of view, this is a matter of much consequence, as *dementia* implies that the person may have been at one time sane, or may again become so, whereas *idiotcy*, strictly speaking, is a congenital disease, and no hope of improvement or change is anticipated. When epilepsy attends insanity, fatuity is a frequent result of a continuance of the disease. In fatuity, a man may be so managed as to act with regularity like a piece of machinery, and this may mislead careless observers, and appear as if the consequence of reasoning; so that much care is requisite to avoid fallacious opinions being formed. It requires the medical man who is to give an opinion on the state of the person to see him very frequently, and to vary the hours of his visits; for, although a person labouring under *dementia* is usually calm and quiet, yet, short periods of irascibility and fury intervene, which may be observed by frequently varying the time of visiting the patient. Attention must also be paid to ascertain whether any indications of hatred of particular individuals is obvious; as this is very characteristic of this morbid state, and no kindness in those on whom their dislike falls can ever lessen or change it. In *dementia* the habits of cleanliness are lost, and the greatest beaux and belles become slovens; and the appetite is generally increased to a degree almost approaching to brutality; in which case, however, the patient does not always get fat; on the contrary, emaciation is often in the ratio of the voraciousness of the appetite. In whichever state the patient appears, the countenance has a peculiar character—a

vacant inexpressive look, which is readily recognized: in general the face is pale, the eye dull and moist, and the pupils are dilated. It is a curious fact, that the greatest number of deaths which occur in insanity is after fatuity makes its appearance.

As such a state of mind renders a person as incapable of managing his affairs, and as open to mischief as insanity, legal means are necessarily taken to protect them; and such cases are generally put under the jurisdiction of the Court of Chancery, when property is concerned, to protect the individuals from the cupidity of relatives and others. The justice and expediency of such a power to protect the persons and property of those who are incapable of taking care of themselves, must be admitted. In determining the necessity, therefore, for the interference of the Lord Chancellor, it is to the medical attendant that the law looks for the detection, exposure, and defeat of frauds; and, in such cases, depending upon the profession, it is a sacred duty to have a perfect knowledge of the disease.

The state with which *dementia* is most likely to be confounded is, undoubtedly, *idiotism*; let us, therefore, briefly examine the nature of this state. *Idiotcy* was formerly employed as a term to signify an unlearned or ignorant person; but in the English law it signifies a person who has been without understanding from his birth. Considerable latitude has been given to the term, as Lord Coke includes in it a person who is born deaf, dumb, and blind. The following is the legal definition of *idiotcy*: "*Idiotæ sunt illi tantum, qui omni ratiocinatione et judicio cavent, tardi, bardi, moreones, macærones, qui inopiâ caloris et spiritum laborant.*" Those are accounted idiots who are devoid of reason and judgment, stupid, lumpish, fools, who labour under a defect of heat and spirits. But, in a physiological point of view, *idiotcy* may be either congenital or *à nativitate*, or it may result from accidental causes, as, for instance, diseased organization of the brain, arising from long continued epilepsy, intemperance, or depressing passions; in which case it, as it were, amalgamates with fatuity, and only differs from it in termination. Congenital

idiotcy is the most frequent form of the affection, and is generally connected with, or dependent upon, some faulty conformation of the bones of the head, and organic affection of the brain and nerves. In congenital idiotcy, the physiognomical characters of this state are almost, in every instance, sufficient to enable us to pronounce judgment upon it. There is a vague, unsteady, wandering eye; at least the eye is seldom fixed for any length of time upon any one object; a stupid expression of countenance, which portrays no sign of intelligence, and the face disproportionately large, compared with the head; the mouth is generally gaping, and pouring out saliva; there is a perpetual rolling and tossing of the head; no memory, no language, no reason. Some, however, among the Cretins, in the Valais, in Switzerland, and among the inhabitants of Carinthia, where idiotism is very prevalent, are not altogether dumb, but express themselves in inarticulate sounds, cries, or in prolonged roars. These poor wretches, and idiots in general, have all the animal instincts, and some of the passions; but their joy is unmeaning mirth; their fear a tranquil quail; their anger a momentary fit of violence; the gratifications of appetite are their only pleasure; bodily pain, or the dread of it, their only sources of anger. It is said that idiots have strong sexual desires, and great powers to execute them, but I apprehend this assertion is, at least, doubtful; it is certain, that persons who become fatuous have seldom any sexual appetites.

In an instance of a girl, twelve years old, mentioned by Esquirol, the head was large and irregularly shaped, and the forehead high and prominent, so that the facial angle was more than ninety degrees. She ate voraciously and without discrimination; passed all evacuations involuntarily; but the menses were regular and abundant. In her walking, and in every movement, she was a helpless infant, insensible to every change of temperature, to rain, and even to her own internal feelings. She could only utter the words, *papa—mamma*, which she frequently repeated. Another remarkable instance is mentioned in Mr. Hobhouse's Travels in Albania; the idiot was a female, about three feet and a half in height. She constantly sat rolled up, as it were, upon a truss of straw: she was quite dumb, nearly deaf, and was possessed of no one consciousness of humanity. She would hop towards her keeper, on being loudly called by a name with which she was familiar.

But all idiots are not so remarkable as these: some possess a certain degree of memory, and display certain powers of imitation, and repeat passages from books which they have been taught, but are incapable of comprehending what they repeat. I have even known instances in which a witty reply has been delivered by a person in every other respect an idiot. A learned Professor

in Edinburgh, once accosting a half idiot, asked him how long he thought that a man could live without brains; the poor fellow, before replying, looked the questioner full in the face, and then laying hold of the lapel of his coat, said, "Pray, doctor, how lang hae ye leeved?"

The brain, and the bones of the cranium, are both unnatural, in point of conformation, in this very humiliating state of humanity. The nervous system is so much deranged, that life can with difficulty be maintained; and therefore idiots seldom live to the age of thirty, and generally die either in an epileptic or paralytic state. Meckel, however, mentions an instance of one who lived to the age of fifty-nine. Hydrothorax is a very common termination of mania, melancholia, and idiotcy; so, also, is phthisis; and in post mortem examinations it is of great importance to distinguish between the effects of those diseases on the brain, and those of mental alienation. Even when the disease is not congenital, the causes which produce it derange the texture of the brain; and the medium of the sensorial impression, that by which the communication between the mind and the external world can only be maintained, being rendered unfit to perform its functions, all the operations of mind are destroyed. Besides idiotism, it is necessary that you should also be aware that insanity occurs also *à nativitate*, and even in cases where neither parent display any symptoms of lunacy. [The lecturer here gave the case of a mad child.] This case is so exactly similar to one related by Dr. Haslam, that I cannot do better than read it to you. (Vide Haslam's Obs. on Madness, p. 198.) Lorry also mentions a child who was born mad; and for the short period that he lived, for he died during dentition, he tore and destroyed every thing.

When idiotism does not proceed to the utmost extent, questions may arise in which it is essential to determine the capacity of the person.

Although the law objects to contracts of marriage made during madness, yet it admits the validity of a marriage contracted with an idiot, *à nativitate*; and the wife of an idiot is entitled to dower. All idiots and lunatics are under the guardianship of the crown, in consequence of a statute made in the reign of Edward the First. In the subsequent reign it became a part of the prerogative of the crown. The king is entitled to the custody of the person of an idiot during life, and has a beneficial interest in his freehold lands. This has always been regarded as a hardship on private families; and, although there are few instances of its oppressive exercise, yet, the responsibility in determining idiotcy is great.

To ascertain the existence of idiotcy Dr. Haslam judiciously advises, as the first step, to examine and endeavour to estimate the power of the idiot's attention; for both me-

memory and his knowledge of objects must be regulated by, and solely depend on, the duration and extent of his attention. If he cannot comprehend the nature of numbers, it is impossible he can have any idea of the nature of property: yet, I have heard of a person who was not accounted an idiot, and yet could not comprehend the nature of numbers beyond four. "If a person," says Dr. Haslam, "is capable of enumerating progressively to ten, and knows the force and value of the separate units, he may be pronounced fully adequate to the management of property: if he can comprehend that twice two compose four, he can find no difficulty in understanding that twice ten constitute twenty; or that so many taken from or subtracted from ten, would leave so many as the remainder. Without such capacity," says Dr. Haslam, "no man, in my opinion, could understand the nature of property, which is represented by pounds, shillings, and pence." A person in this state is competent to make a will; but an idiot cannot make a will; an insane person, during a lucid interval, may make a will; and should he become insane after making a will, at this period, the subsequent lunacy does not operate as the revocation of a will. A petition for a commission of lunacy was preferred against Lord Donegal, in the year 1731, on the ground of the weakness of his understanding. A caveat having been entered, Lord Harwicke, who was the then Lord Chancellor, ordered an examination. In this case it was found that Lord Donegal could give rational answers about his estate; but not to any questions about figures, as to which he could not answer the most common. Lord Harwicke did not think that a sufficient reason for granting a commission. It may be necessary to inform you, that a commission of lunacy is a writ under the great seal, directing a certain number of commissioners, with a jury of twelve men, to inquire on oath whether the person be an idiot, a lunatic, or non compos: in all of which states a person is regarded incapable of making a will. Persons who are idiots or natural fools, persons imbecile from old age, or from disease, habitual drunkards, those labouring under *delirium tremens*, *phrenitis*, and those in *typhus* fever, are regarded as, also, legally incapable of disposing of property by will. It is on this account that the law guards so jealously the property of lunatics; and it is on this account that lunacy is often imputed when it does not exist. "I knew an instance," says Mr. Bakewell, "of a person of very respectable family, who became insane soon after giving birth to a son. She was put into a back garret, where she was coarsely fed and coarsely clothed, while her husband enjoyed every luxury which money could purchase, in the house below, until the son became of age, and had her released." Instances are also recorded in which sons have imputed

insanity to their fathers, brothers to brothers, and even mothers to sons, solely for the sake of property. Persons subject to insanity are incapable of disposing by will during their insanity, although a will made by such person, previous to insanity, is not revoked by the circumstance of subsequent insanity, or by an attempt to obliterate it during a fit of insanity: thence the importance of substantiating these states. Such abuses, when inquired into, cannot be decided without the aid of medical evidence. The law admits of the disposal of property, however, during a lucid interval: a will made in a clear lucid interval will be held valid.

Another reason for inquiring closely into cases of lunacy and idiotism is, the plea which is often set upon this point in bar of execution. If idiotcy be proved, the prisoner must be discharged the indictment, and placed in safe custody; if a lunatic, the same is the case, unless it be proved that he is in a lucid interval; if, also, it be proved that he was actually insane when the crime was committed, then he must be discharged. Before shewing in what manner such inquiries should be conducted, and examining the grounds for granting certificates to confine lunatics, it is necessary to take some notice of the meaning of the term *lucid interval*. To do a sensible act is not a lucid interval. (Collinson, p. 43). By this term is not meant a simple remission of the malady, but a total suspension of it—a complete, although temporary, restoration of reason. The law on this head is explicit—"It is not enough to shew that the act was *actus sapienti conveniens*, for that may happen many ways; but it must be proved to be *actus sapientis*, and to proceed from judgment and deliberation, else the presumption continues." (Hargrave's Coke on Littleton, p. 246, b. n. 1). The law always regards the possibility of a lunatic to recover his senses, at least per intervalla; but these intervals, or lucid intervals, are not mere intermissions of the violent symptoms of the disease, nor a cooler moment, an abatement of pain or violence, relaxation from a higher state of torture, nor the relief of a mind from excessive oppression: it is that space in which the mind, having thrown off the disease, has recovered its general habit. It is not necessary, however, that the mind should have recovered its pristine strength and vigour, to constitute a lucid interval; but it is essential that the party may be equal to the conduct of the common affairs of life, and that ordinary people should think him so. The term is, therefore, relative, but the recovery must be at the time complete. The ascertaining this point is, perhaps, one of the most difficult connected with insanity, in order to arrive at a safe conclusion; for often lunatics are sufficiently cunning to carry on a plan, and succeed in imposing upon their attendants. In determining, therefore, on the actual ex-

istence of a lucid interval, the examinations of the physician should be frequently repeated, and the conduct of the lunatic closely investigated in every state in which he can be placed. In many instances, an insane person will so frame his conversation and behaviour, as to appear in perfect possession of his reasoning faculties; but, if the discourse be protracted and varied, the subject, which is the disordered point in the madman's understanding, being brought forward, the presence of the disease will soon manifest itself, and the individual in conversation with the supposed sane man be soon convinced of the hastiness of his decision. Sometimes, however, the mind of the lunatic is aware of the point of insanity, and evades questions which lead to display it. There is an intermittent species of lunacy, also, in which the paroxysm returns at stated intervals, generally once, twice, or three times a year, and lasts several weeks, the subject of the hallucination being almost always the same; in this case a person is considered quite capable of managing his affairs. The whole life of Cowper the poet consisted of a series of lucid intervals and paroxysms of insanity. The celebrated poem of Lucretius "*De Rerum Natura*," was written during the lucid intervals of intermittent insanity. The existence of this state may be discovered in various ways; one symptom, almost conclusive of a lucid interval, is the acknowledged consciousness of the patient of having laboured under false ideas, when the subject on which his insanity hinged becomes the matter of conversation. But for legal purposes this must be clear and perfect; and it is only under such circumstances that any disposition of property can take place. On equally sound principles, every person making a will is presumed of sound mind, until the contrary be proved, and this proof must rest chiefly on the opinion of medical witnesses; for a will may contain the utmost propriety of its provisions, and yet constitute no conclusive evidence of the sanity of the testator, as Collinson remarks; the testator may have acted reasonably by accident, or the will may have been the production of another. An old man, in his second childhood, who cannot remember his name; a paralytic, reduced to such a state; or one whom excessive continued intoxication has deprived of the use of his understanding and reason, cannot make a will. But a man of weak understanding, between a wise man and a fool, is not disabled from making a will. All these points are determined chiefly by medical evidence; and much discretion is requisite in the medical witness; for high reputation and celebrity in the profession will not enhance the value of evidence before an English judge, if the case be not clear (See case of *White v. Wilson*, Coll. Treat. p. 626).

Besides being called upon to determine the condition of persons supposed to be in-

sane, medical men are frequently requested to give an opinion respecting the probable issue of the disease—whether, in placing the property of the insane persons in the hands of trustees, the means to be adopted are to be regarded of a temporary or permanent description. Under these circumstances it is of much importance to ascertain the extent of recoveries which have taken place—the sex, age, and other circumstances which impede or favour so desirable an event. In respect to the number of recoveries, as stated in tables of the admissions and recoveries, in the great public hospitals in this country, we find that the proportion of recoveries have been as $2\frac{3}{4}$ in 5: on the continent they have been scarcely more than 2 in 4: the prospect of recovery is greatest in young persons, few lunatics having been cured after sixty years of age. With respect to sex, lunacy is more frequent in females than males; but in this country, where the education of females is directed to strengthen the mind, rather than to cultivate the imagination, this difference between the liability of the sexes is much less striking than in other European countries. In France, for example, M. Pinel calculated, in 1802, that there were two female lunatics for every male: in Bethlem Hospital, in the course of 46 years, 8,874 lunatics were admitted, of whom, Dr. Haslam informs us, 4,832 were females, and 4,042 males—nearly 1-5th more of females than males. Something, also, depends on the condition of the patients—thus *celibacy* seems to favour insanity; out of 1,726 female lunatics, 980 were single women, 397 married women, and 291 widows—out of 764 males, 402 were single, 201 married, and 59 widowers. The fact of the person having been previously attacked, and whether the intervals are shortening or extending, should also influence our prognosis: at the same time we should bear in recollection that many persons, after repeated attacks of the disease, have been permanently cured. Education and the premature development, as well as an overstrained exercise, of the mental faculties are often exciting causes of insanity, and also influence greatly its progress and tendency to recovery. In uncivilized nations madness is comparatively rare; it is rarely, according to Humboldt, found among the native Americans; in Russia and Turkey it is rare; and M. Desgenettes found only 14 lunatics in a population of 300,000 people in Grand Cairo. All of these circumstances, therefore, must be inquired into in forming our opinion as to the necessity of confinement of lunatics, and the probability of their recovery.

One of the most responsible duties which devolves upon a medical man, and one which he labours to exercise with the greatest caution, is the granting certificates for the confinement of insane patients. It is one, also, which is properly looked upon

with great jealousy by the public; and when judiciously exercised, should elevate the profession above all suspicion of prejudice, erroneous bias, or connivance.

There can be only one opinion respecting the propriety of separating the insane from their families and from society. It is only by doing so that old associations can be broken, and new sensations impressed upon the mind: besides, experience has demonstrated that a separation of this kind is invariably followed by a remission of the complaint. Amongst his friends, the maniac sees only misery, vexation, and enemies; every thing around him contributes to confirm the erroneous judgments which influence his conduct; whilst, on the other hand, the presence of strangers almost always suspends the delirium of the insane, and aids the influence of new impressions, which is always useful. Such being the case, the only circumstance necessary for your consideration is to determine the truth of the insanity, and the advantages to be obtained in each particular case by a removal from friends, and confinement in a lunatic asylum. Friends are always repugnant to acquiesce in this part of the plan of treatment, and individuals are always at hand to throw blame upon the practitioner who advises such a step; and thence too much caution cannot be observed either in recommending confinement, or granting a certificate of lunacy, when friends solicit it. This caution is more particularly requisite, as the leaning of lawyers is always in favour of the lunatic; and a man may be somewhat idiotic, a little childish, or even to a certain extent mad, without the law considering him non compos. We ought, also, always to bear in mind, that in ordering the confinement of the insane, we are placing a fellow man at the mercy of those who are to have the charge of him; and if that power be abused, how difficult to substantiate a charge of misconduct or cruelty.

No person can be confined in a lunatic asylum, unless an order is produced from some relative or connexion, duly specified, and a certificate of insanity, either from a Chancery Commission, or a medical one, signed by two physicians, surgeons, or apothecaries, who shall have *separately* examined the patient at two separate times. In pauper cases, one medical certificate is sufficient, but it must be attested by the clergyman and overseers, or by two justices of the peace. Within three days, also, after the patient's admission, notice must be sent to the Clerk of the Commissioners of Lunacy, and his admission registered.

Having taken these views of mental alienation, let us now examine, briefly, the manner in which the medical practitioner should perform his forensic duties in such cases. Let us suppose a case *de lunatico inquirendo*. In order to obtain such an inquiry, the person must be supposed to be either an idiot or a luna-

tic; and these inquiries are ordered upon petitions by private individuals, accompanied by affidavits shewing incapability of managing his affairs by reason of insanity. If the insanity be so obvious that it is readily recognized by the judge and the jury, the physician has an easy task to perform; but where doubt exists, and difficulties arise in determining, then all his skill and experience must be called forward to guide the decision of the Court. He has given the medical certificate of the patient's lunacy, and he is supposed competent to prove the correctness of this—the commission, also, being commonly granted on the affidavit of the medical attendant of the patient. Unsoundness of mind may be alleged against a person by common fame; insanity may be even justly imputed to him by his relations and friends; yet the burthen of the proof is cast upon the medical man, and confinement cannot take place without his authority. If the propriety of the measure be disputed, as has often happened, and the case become one of legal inquiry, the medical witness is called upon not only to state as to the prevailing opinions of the lunatic and his disposition to act upon them, but also, in plain and intelligible language, to give the Court some idea of the general features of the disease. He is also required to state the peculiar propensities of the lunatic; whether they originate purely from the state of insanity: and in the examination of the lunatic by the Commissioners and the Jury, it is his duty to lead the examination into such a channel as will conduct to the full development of the aberration of intellect. This is not, however, to be effected by directly selecting the subjects of the maniac's delusions, as he will often endeavour to evade or pretend to disown them; but his consecutive actions and associations of ideas must be traced down from the origin of his distemper, and in passing over the path in which he originally stumbled, he will again most infallibly trip. It is, however, a very difficult matter to prove insanity; it is not sufficient, especially when the case involves the disposition of property, to prove that the testator was insane. The nature of the disease, the period of its continuance, and the particular acts which characterize it, are all required to be satisfactorily proved. The chief value of such inquiries is to ascertain how far the insanity of the person who is the subject of a Commission renders him incapable of properly managing his property, and mingling in society without annoying others. But it is not enough that such a person has transacted his affairs with some degree of prudence, and forbore, as it were, to follow the impulse of his insane opinions; for this has been the case, and yet suicide has soon followed, or a furious paroxysm of mania displayed itself.

If a medical man is attentive and observing, he can always detect the earlier ap-

proaches of the disease, and it is his duty to demonstrate from the nature and tendency of the attack, that the patient will soon be unfit to be trusted either with the management of his affairs, or to conduct himself properly as a member of society.

In the legal inquiries into insanity, lawyers put a peculiar stress on the term *unsound mind*, which means that a person has not sufficient capacity to conduct his own affairs; thence we hear of decisions in which a person is declared not to be an idiot *ex nativitate*, nor a lunatic, but to be of unsound mind; that is, in a state of mental weakness or imbecility, distinct from either.

But the late Lord Eldon ruled that this was not enough to place a person or his property under a committee of management. "There is," says the learned Chancellor, "a great difference between inability to manage a man's affairs, and imbecility of mind taken as evidence of unsoundness of mind." The case of a man named Charlton Palmer, was one in which, from the person being much stricken in years, he displayed the mind of a child; "it was therefore," says Lord Eldon, "in that sense, imbecility and inability to manage his affairs, which constituted unsoundness of mind." Now let us inquire what degree of imbecility of mind amounts to unsoundness; for it cannot, strictly speaking, be admitted that, because a man's mind is as weak as that of a child, it is necessarily unsound. Unsound mind can only imply insanity; indeed in tracing the derivation of the word, as Dr. Haslam remarks, it seems to be equivalent to the Latin, *Insanus*, from which the Anglo-Saxon unsound is evidently derived. Imbecility implies a degree of mental incapacity equivalent to idiotcy, a degree which renders the person inadequate to the management of his affairs; and which can always be as readily, and even more readily, ascertained than insanity; and includes all the mental evidences which include unsoundness.

If these remarks respecting mental alienation generally, and unsoundness of mind, be correct, there can be no difficulty in knowing the data upon which the physician is authorised to grant a certificate to confine a lunatic, or grant affidavits to obtain a commission *de lunatico inquirendo*. In expressing this opinion, I cannot avoid again impressing upon your minds the great danger of hazarding a hasty opinion, or overstepping in the smallest degree those boundaries and fences which the legislature has properly drawn around the wretched victims of insanity. Although lunatic asylums are no longer to be regarded as prisons for the safe custody and punishment of their unhappy inmates, and now most truly merit the name, as they possess the character of hospitals for the treatment and cure of the most dreadful malady under which humanity can suffer, yet, it is proper that in assigning patients to them, everything

should be done to prevent even the semblance of oppression or injustice.

With respect to the law of lunacy, it is requisite to make a few remarks.

The law throws its shield over persons who are non compos, both because society shall *non compos* them, and individuals shall not defraud them. The justice and expediency of such a power is undeniable: and therefore, when property is at stake, a Commission for inquiry may be obtained upon petition preferred to the Lord Chancellor for that purpose: and whether this is preferred by relations or others, or by information of the Attorney-general, it must be accompanied by affidavits, setting forth the unsound state of mind of the person against whom the commission is desired, and giving instances in proof of the alleged insanity. The necessity of medical assistance in such cases is obvious; and as they necessarily become witnesses, their expenses must be paid. A physician is allowed a guinea, or more if he come from a distance: but this is only conduct money, to bear his expenses to the place of meeting; any further remuneration rests with the parties. Under all circumstances, however, the medical as well as all other witnesses are bound to attend; and if they refuse, the Lord Chancellor will make an order upon them for that purpose.

When artifices are employed to obtain the execution of a will from persons *non compos*, medical persons may be directed to have access to them, even when no inquisition has found them *non compos*; but this will not be granted unless strong reasons are produced for such an indulgence.

I have already stated that insane persons are not chargeable with criminal offences; but their state of mind must be proved by medical men; and in doing this, it is not enough to demonstrate the insanity; the particular kind of it which is pled in excuse must be described and correctly understood. But a *non compos* is not only excused in the commission of criminal offences: every protection is cast around him, lest he should receive injuries from the hands of others, and especially those of a nature to which his mental imbecility peculiarly exposes him. In illustration of this remark, I have selected the following illustration, to shew the danger of professional men forgetting the duty they owe, both to their patient and their profession. (See Col- linson, vol. 1, p. 509).

With respect to lunatic asylums, the regulation of these, and the granting certificates to confine patients within them, the New Lunacy Bill, passed in 1832, has greatly altered the law. I will point out a few of the enactments, particularly referring to medical men, as your present occupations may deny you the time necessary for the attentive perusal of the entire Bill.

In the first place, it defines medical men. (See Bill, p. 962).

In the second place, it points out the necessity for a medical certificate, in order to remove an insane person into a licensed asylum, justly guarding the insane, at the same time, by preventing these certificates from being signed by physicians or medical men, who are proprietors, or any way interested in the success of the asylum. (See Bill, p. 972). Another provision regards the mode in which lunatic paupers

are to be received, (Ib). It enacts that lunatic asylums are to be visited by medical men, (p. 975); in what manner insane persons are to be received into unlicensed houses, (p. 978); and gives forms of the medical certificates required on these occasions, (pp. 987, 988.) In these respects, the law is most explicit; and therefore any infringement cannot be otherwise interpreted than as being culpable, and consequently punishable.

LECTURES

ON THE

INSTITUTIONS OF MEDICINE,

DELIVERED BY JOHN FLETCHER, M.D., F.R.C.S.E., AT THE ARGYLE SQUARE SCHOOL OF MEDICINE, EDINBURGH; SESSION 1834-35.

LECTURE XVI.

Conclusion from the preceding Evidences regarding the Vital Principle—Irritability or Vitality a Property of Organized Matter—Solids and Fluids.

SINCE, then, the attempts to establish the existence of a vital principle as an entity may be regarded as having failed—not to mention its incompetency to effect the phenomena which have been attributed to it, even though its existence had been established—we seem compelled to acquiesce in the proposed alternative, and to admit that life is merely an abstract term, used to denote the sum of these phenomena, the forces immediately effecting which are to be sought for, at least partially, in the results of organism (a). It seems, in-

(a) Some faint glimmerings of the true nature of life, had from time to time broken in upon physiologists, even during the long period that the vital principle doctrines remained formally unquestioned; and it was as illumined by one of these, that Mead compared the living body to a machine, endowed with the property of perpetual motion, "owing to its parts being so disposed that, while they performed their respective functions, they constantly and mutually repaired each other." But it was at the hands of John Brown—low as was his condition, vagabond as were his habits, erroneous as were, in many respects, his views, pernicious as was his practice, and scorned and reviled as is for the most part his memory—that the "vital spark of heavenly flame," of which we have been speaking, received its first severe blow, and a degree of closeness and precision was introduced into physiological and pathological reasonings, of which, so long as men had the free use of this *Deus in fabula*, they would of course be destitute. It was he who distinctly shewed, for the first time, about the year 1780, that life as a $\psi\upsilon\chi\eta$, or anima, did not exist, being neither matter itself, as the Stoics and Epicureans among the ancients, and Dr. Priestley among the moderns, had supposed, nor an immaterial substance added to matter, as almost all the rest of the ancients, and so many of the moderns, had imagined; but that, as a *Zoē*, or vita, it consisted merely in a series of phenomena

displayed by organized beings, and resulting from the action of certain exciting powers attached to matter, or a certain susceptibility in other matter of being excited. "In all states of life," says Brown, "man and other animals differ from themselves in their dead state, or from any other inanimate matter, in this faculty alone, that they can be affected by external agents, as well as by certain functions peculiar to themselves, in such a manner that the phenomena peculiar to the living state can be produced;" (*Elements of Medicine*, 1788, vol. i, ch. 2); and this simple and satisfactory view of the matter in general—subject, it is true, to not a few drawbacks on the score of errors in detail, which were inseparable, perhaps, from the infancy of a schism like this, and to many of which allusion will be made in future—was eagerly taken up, and soon became prevalent among physiologists. Among the first to adopt this view was the venerable Blumenbach of Göttingen; who, although he has always continued, like many others, to use the word vital principle, still constantly speaks of it, not as a substance, but as a property—so that the term becomes synonymous with irritability or vitality—and explicitly asserts that no such actions as constitute life can take place except when this property is acted upon by the requisite stimuli. (*Institut. Physiol.* 1786, sect. 4). Similar doctrines were promulgated soon afterwards by Soemmering and

deed, easy to conceive that certain forms of matter may be possessed of properties distinct from such as are either strictly chemical or strictly mechanical—at least, as these properties manifest themselves in inorganic matters—and that, as combustibility and elasticity, as before observed, are properties of certain forms of such matters, so a peculiar susceptibility of another description may be, in like manner, a property of organized tissues; and it seems equally easy to conceive that, as the combustibility of a combustible substance, or the elasticity of one that is elastic, displays itself only when the former is subjected under favourable circumstances to the action of oxygen, or some similar matter when it gives rise to the phenomena of combustion, or the latter is struck by a hard body, when it gives rise to those of sensible motion, so this peculiar susceptibility of organized tissues manifests itself only when such are exposed to the agency of some peculiar powers, when it gives rise to the phenomena of life. It is not life then, but only a necessary condition of life, namely, irritability or vitality, which is the result of organism; and when we speak of organized matter, we mean, not that it is endowed with life—any more than any inorganic matter is endowed with combustion or sensible motion—but only that it possesses a property, which, when acted on by appropriate powers, is competent to give rise to that series of actions in which life consists. Nor is the existence of this property of organized matter at all more doubtful, or its nature at all more obscure, as elsewhere observed, than those

Reil, the latter of whom describes vitality as the effect of the form and constitution of matter, and life as this property in action; (*Archiv. für die Physiologie*, 1796); and they began, about the same time, to be taught in France by Baron Cuvier and Bichât. According to Cuvier—a name still deservedly in the highest repute, not less in physiology, notwithstanding the vituperation of his logic by Dr. Barclay, than in anatomy, notwithstanding the charge of hebetude latterly preferred against him by Geoffroy St. Hilaire—life consists in “l'ensemble des phénomènes qui ont donné lieu à sa formation;” and he well remarks, that to define it with precision is to run over in detail all the characteristic actions of living beings; (*Leçons d'Anat. Comp.* 1799); while Bichât again describes it, in exactly the same acceptance, as “l'ensemble des fonctions,” unfortunately adding, however, “qui résistent à la mort”—unfortunately, because these words, if they are intended to imply that death is anything substantial, are absurd, if only that it is the cessation of life, superfluous—(*Sur la Vie et la Mort.* 1802). The same view of the matter was subsequently taken by Cabanis; according to whom, “Vivre n'est autre chose que recevoir des impressions, et exécuter les mouvements que ces impressions sollicitent;” (*Rapports du Physique et du Moral de l'Homme*, 1805, tom. ii. p. 137); and although he also speaks of a vivifying principle or faculty, namely, irritability or vitality, as “la condition sans laquelle les phénomènes propres aux différens corps organisés ne sauroient avoir lieu,” distinctly adds “Je suis surtout bien loin de vouloir conclure affirmativement de ces phénomènes l'existence d'un Être particulier, remplissant la fonction de principe, et communiquant aux corps les propriétés dont leur fonctions résultent.” (tom. i. p. 245). In the mean time, the same tenets were further maintained in Germany, among many others, by Prochaska and Hildebrandt; and shortly

afterwards were adopted by Mr. Lawrence, who was the first to present them in their properly physiological aspect—for by Brown the application of these doctrines had been principally pathological and therapeutical—to the physiologists of this country. Lawrence speaks of the substantial vital principle, as hastening fast, at the time at which he wrote to “the vault of all the Capulets;” and, following very closely Blumenbach, Cuvier, and Bichât, represents life as “consisting in the assemblage of all the functions or purposes of organized bodies, and the general result of their exercise,” (*Int. to Comp. Anat.* 1816, p. 120), a definition which gave rise to the facetious comparison already spoken of, by Mason Good, of the human frame to a barrel organ. These doctrines of Mr. Lawrence, owing to some foreign leaven with which they were unhappily and very unnecessarily mixed, but which need not be particularly noticed in this place, were for some time any thing but popular in Great Britain; but they were nevertheless adopted, with some mitigations, by Burns, Gordon, Allen, and others, and, not only unmitigated, but in rather an aggravated form, by Sir Charles Morgan. Like his predecessors in the same fields, he defines life to consist in “the sum total of functions which any individual can perform;” but, unlike them, he denies the existence in organized beings, not only of any substantial principle of action, but even of irritability or vitality, as a property essentially distinct from those of which inorganic matters are possessed; “the difference between the two,” he says, “being purely formal.” (*Philosophy of Life*, 1818, p. 29). To this *ultra* proposition, however, as applied to the actions, any more than as applied to the structure of the two, in which respect also, as we have already seen, some attempts have been made to identify them, it is impossible to assent. Similar general doctrines were in the mean time advocated in France, by Magendie,

of such as are strictly chemical or mechanical. The latter, indeed, now frequently engage our attention, and what is familiar we easily persuade ourselves is real and intelligible; the former is seldom the object of our contemplation, and what is rare generally appears at first sight fanciful and abstruse. But upon reflection, we shall find that we have no more evidence of the existence, and know no more of the nature of combustibility, or, of elasticity, than of irritability or vitality. It is from the effects alone of any one of these properties that we infer their existence, and determine their nature; and when we say of one substance that it possesses combustibility, all that we mean is, that when exposed to the action of certain other substances it takes fire; of another, that it possesses elasticity, we mean only that, when struck, it rebounds; and of a third, that it possesses irritability, we mean only that when acted on by certain powers, it manifests life. We know fully as much therefore of any one of these properties as of the rest—that is to say, as we know matter only by its properties, so we know properties only by their effects. We know nothing of any one of these properties in the abstract, nor is it therefore by way of an explanation of any of the phenomena in question, that the terms denoting their properties are used (*a*): they are employed merely as expressive of our belief in the exist-

Broussais, Adelon, Dutrochet, Brâchet, and others—in particular by Adelon, who, after enumerating the chief actions of organized beings, says expressly, “ces actions—constituent une vie;” (*Physiologie de l’Homme*, 1823); and whose three admirable Chapters on the Philosophy of Physiology might serve to settle, in all but the most blindly prejudiced minds, once and for ever the question respecting the existence of life, “comme un Etre réel.” (tom. iv. p. 645). Dr. Milligan, the translator of Magendie, observed, in allusion to the doctrine of a vital principle, “the student will do well, in all such dubious expressions by authors, to substitute for vital principle, the words vital state or vital action.” “The primary idea of life,” he remarks, “in our language, signifies motion—and if we analyze the idea, as it arises in our minds, we shall find that an interest or independent power of motion, accompanied by frequent, actual, appreciable motion, constitutes the whole of our notion of life, before it is adulterated by the study of the natural sciences, and the writings of philosophers.” (Translation of Magendie’s *Comp. of Physiol.* 1823, note to p. 9, l. 16). Mr. Mayo again says, almost in the words of Lawrence, “the term life is a collective expression for an assemblage of phenomena.” (*Outlines of Physiology*, 1827, p. 8). But the author who, in modern times, has most systematically and successfully taken up the cudgels against the substantialists, is Dr. Prichard, who after enumerating, in a most masterly manner, the chief phenomena to explain which a substantial vital principle has been so unnecessarily put in requisition, and showing the polypragmatical and often inconsistent nature of the part assigned to it, concludes “that the hypothesis of a vital principle has been proved, by a careful examination, to be wanting in every characteristic of a legitimate theory.” (*On the Vital Principle*, 1829, p. 132). Dr. Prichard is somewhat too fond of chemical and mechanical explanations of vital processes, but, in as far as he admits of vitality at all, seems to be persuaded that it results from organism;

and it is only from having fallen into the common inaccuracy of confounding vitality with life, that he objects to the definition of life given by Cuvier, Bichât and the rest; he says “that life (meaning vitality) may subsist without the performance of any function.” (p. 1). They agree in fact, but differ in words. Since this time, various other authors have adopted this view of the nature of life—among the rest the laborious and talented Tiedemann, by whom the term life is distinctly restricted to signify the sum of the actions, or, as he calls them, manifestations of activity of organized beings; and who, speaking elsewhere of irritability, or vitality, aptly remarks, “how wrong the physicians and philosophers have been who created it as a fundamental force of life, or the principle of life ($\psi\upsilon\chi\eta$). They have mistaken for the cause of life a simple property of organized bodies, which is the consequence of the plastic force”—(i. e. of their organism). (Translation of Tiedemann’s *Physiology*, by Gully and Lane, 1834, ss. 82 and 557). Lastly, one of the most deservedly celebrated of British physiologists, albeit in some points perhaps mistaken, in a work published only a few months ago, aptly remarks, “Life, without much violence done to language, has been called a forced state. It consists of excitement called into action by suitable stimulants.” (*On Sleep and Death*, 1835). The tendency in the human mind to personify its abstractions, must really be insuperable if it can resist all the weight of reason and authority which may be brought forward against the indulgence of it in this instance.

(*a*) Under whatever terms we may clothe the distinctive property of organized matter, it can signify only, as Magendie remarks, “la cause inconnue des phénomènes de la Vie.” It is not then to anything that we understand better than these phenomena, but to something which we do not understand at all, that we refer when we attribute them to irritability or vitality; and it cannot therefore be by way of *explanation* that we employ these terms. They are the x , says Adelon, of an algebraical problem.

ence of certain forces, which, as recognised by their effects alone, we determine to be distinct, only because these effects are in different cases altogether dissimilar.

The notion of life then to be deduced from what has preceded, is that it consists in the sum of the characteristic actions of organized beings, performed in virtue of a specific susceptibility, acted on by specific stimuli; and as this susceptibility and these stimuli, when natural, may be regarded respectively as the predisposing and exciting causes, as it were, and the actions resulting from them as the proximate cause of *Health*, so it is of some change in the first that every predisposing cause, of some change in the second that every exciting cause, and of some change—or result of such change—in the last, that every proximate cause of *Disease* severally consist. But on this clear and simple doctrine of the connexion between physiology and pathology—in this view of the nature of life—it will be necessary to insist in future: at present we have to inquire a little more particularly into the character and sources of this susceptibility on the one hand, and into the nature of those stimuli by which it is called into action on the other.

These characteristic actions of organized beings have been above shown to be all referable to certain movements effected in either particles or masses of matter. Of the former we have examples in those by which the vessels conveying the mature fluid from the respiratory organ absorb certain gaseous substances from the atmosphere, as well as in those by which the vessels carrying the crude fluids to this organ secrete other gaseous matters to be diffused through it, as in respiration; and again in those by which the vessels proceeding from the heart, or corresponding organ, with the mature fluid, deposit new solids and fluids in every part of the body, as well as in those by which the vessels returning to this organ with the crude fluids break down and carry away old ones, as in nutrition, secretion, and absorption, in the general acceptation of these terms. Of the latter we have examples in those by which the chest and lungs, or corresponding organs, heave and fall upon these gaseous matters, as in respiration; those by which the heart, or corresponding organ, is contracted and dilated upon its blood, as ministering to the circulation of this fluid; those by which the stomach and intestines, or corresponding organs, are elongated and shortened upon the alimentary matters, as in digestion; those by which the gravid uterus, or corresponding organ, expels its contents, as in generation; and those, lastly, by which all the muscles called voluntary act upon the parts to which they are affixed, as in voluntary motion. Now, the first question that arises is, whether does the susceptibility of those movements in which life consists reside in the solids, in the fluids, or in both? Whether it is the mature fluid which *per se* absorbs certain gases, and secretes various solids and fluids; and whether it is the crude fluids which *per se* secrete certain gases, and absorb various solids and fluids, or is it owing to the action of the several vessels which contain these fluids that such movements take place; and again, whether is it spontaneously that the gases enter and depart from the respiratory organ, that the blood issues from and returns to the heart, that the alimentary matters travel along the stomach and intestines, and that the contents of the gravid uterus escape, or is it in virtue of the actions of these several organs that such movements are effected (a)? There is one movement among those above specified,

(a) After what has been already said of the nature of life, it would be absurd to inquire whether it be capable of residing as well in fluids as in solids, since it is obvious that it cannot, as a non-entity, reside in either; and the only question that can by any possibility be mooted—namely, whether fluids and solids may be equally possessed of the property of irritability or vitality—has been already, in a great measure, answered by the two propositions, that this property is the result of organism, and that an organized being is necessarily composed of both solid and fluid parts, and not of either exclusively. It is true that some kinds of microscopic animalcules, as the wheel-animal (*Rotifer*, 1), may be so far dried as to fly in pieces, when touched with the point of a needle, like a piece of salt, without losing their irritability, while other animals, on the contrary, as the sea-blubber (*Medusa*, 4), are naturally of the consistence of a thin jelly, and still abundantly irritable; but neither are the former quite destitute of their nourishing juices, nor the

latter of their solid membranes and vessels. It is probable then that irritability cannot be possessed by exclusively solid or exclusively fluid substances, whether as entire organized beings—could such exist—or as constituent parts of such beings. But, while the several fluid parts of an organized being are strictly what they are represented to be, whatever solid matters they may occasionally hold in solution, the reputedly solid parts of such a being are never without a large admixture of still fluid matters, which continually traverse them: consequently these reputedly solid parts—in other words, the several organized tissues, may be *à priori* inferred to be alone capable of possessing irritability or vitality. It is contended by Blumenbach (*Comment. de Vit. Sang.* 1786), as well as by his commentator, Dr. Elliotson, that there is nothing irrational in assigning life to the fluids as well as to the solids: the latter observing, in support of his position, “it is impossible to deny that the male and female genital fluids are alive—that is, possessed of irritability—because, from their union, a

namely, that of the voluntary muscles, in which the fluids seem to have nothing to do, the action in this case beginning and ending, to all appearance at least, with the solids (a); and in the cases of the ingress and egress of the gases to and from the respiratory organ, the course of the alimentary matters along the digestive canal, and the passage of the contents of the gravid uterus out of this cavity, there cannot be a reasonable doubt that the sole active instruments are the respective solid organs in question. The only movements then, among those above enumerated, in which any active instrumentality can be with the least show of reason attributed to the fluids, are those by which the blood is circulated, and those by which nutrition and secretion, on the one hand, and absorption on the other, are effected—in other words, the only fluids of the animal body—and of those of plants it seems superfluous to speak at present—which can be with any degree of versimilitude presumed to be possessed of the specific susceptibility of action which characterizes living matter, are arterial blood, venous blood, lymph, and chyle (b).

living being is produced.”—(Translation of Instit. of Physiology, 1820, p. 45). But, to say nothing of the male genital fluids, the office of which in generation, since the explosion of the animalcular hypothesis, has not been very well established—although it certainly cannot be conceived to impart much substance to the embryo, if, as Spallanzani calculates, a quantity not exceeding the 2,994,687, 500th part of a grain be sufficient for impregnation—the alleged female genital fluid is not merely a fluid, but, like organized lymph in the case of new growths, a substance possessing from the first such solid as well as fluid parts as are necessary to the manifestation of the plastic power by which all the parts of the embryo are to become developed. If this, then, be all that can be said *à priori* in favour of the presumption of the vitality of the fluids—a presumption which, as remarked by Dr. Milligan, “seems revolting to our common sense”—(Translation of Magendie’s Physiology, 1823, Note to p. 11)—it must be allowed that we have no sufficient grounds *in limine* for questioning the justice of the prevalent opinion upon the subject.

(a) It is proper to observe, that by some physiologists the contractions of muscles in general have been ascribed to the ingress into them of jets of blood or other fluids; but if this doctrine be admitted at all, it must be applied not only to the voluntary muscles, but—perhaps to the muscular coat of the parenchymatous tissue—and certainly to the respiratory muscles, the heart, the muscular coat of the stomach and intestines, the uterus, and in short, all the solid organs, the movements of which are now under consideration, and the whole question of any primary action in the solids becomes at once merged. It will in future, however, be shown that the above hypothesis of the immediate cause of the contractions of muscles is altogether untenable.

(b) That the blood of an animal—to take this as *instar omnium*—contained within itself the substantial life thereof, was distinctly inculcated by Moses (Leviticus, chap. xvii. ver. 7), however sceptical Spencer and others may have expressed themselves on this point; and appears to have been equally clearly implied by Solomon, where he says,

“Out of the heart are the issues of life.” (Prov. chap. iv. ver. 23). The ancient Greek philosophers also continually spoke of the fluids of the body, to the exclusion of the solids, as the immediate domicile of life: and frequently called the blood, τὸ πῶτον τὸν ἀνθρώπου, as something essential directly to accommodate the Πυρ καθαρῶν, or substantial life, under whichever of the thousand and one names this was at different times signified. The same doctrine was reiterated by the poets, both Greek and Roman, who frequently identified the blood with the life or spirit, as in the passage of Virgil,

“Purpuream vomit ille animam.”

(Æneid. lib. ix, l. 349).

And numerous similar passages might be quoted. In modern times this notion was perpetuated principally by Harvey, the reputed discoverer of the circulation of the blood; who represented this blood, not only as “sufficiens et idoneus qui sit immediatum animæ instrumentum,” but also as containing within itself this anima, “non vegetativa modo, sed etiam sensitiva et activa.” (De Generatione Animalium, 1651). It is true the ancient Medean operation of the transfusion of blood, which was introduced soon afterwards by Lower in this country, by Denys and Emerez in France, and by G. Riva and P. Manfredi in Italy, was very far from effecting the metempsychoses which, upon the presumption that the blood of an animal was the life thereof, were fondly anticipated from it, but the doctrine was nevertheless espoused by Glisson and most other authors, down to the time of Haller and Zimmerman, in whose researches on irritability, the blood was taken so little account of, that it sunk into comparative neglect; and this was still further promoted by the theories of Brown, by whom the blood was regarded in the light of a mere stimulus to the solids. The old notion was, however, revived in all its pristine glory by John Hunter; who, unaccustomed as he was to pay any regard to the literature of the science which he cultivated, blindly imagined that it originated with himself, and who represented the blood as containing within it the proper materia vitæ, or the immediate domicile of life—which by him it will be remem-

Letters on Cholera Morbus, addressed to Lord Melbourne. By Scrutator.

SCRUTATOR falls exceeding foul on Lord Melbourne—his Lordship, at the time of the appearance of the letters in some public print, being Secretary for the Home Department—for believing in the contagion of cholera. Scrutator was perfectly right in what he maintained on the subject at that time; but we doubt whether the contagion of cholera is a matter of interest or worthy of question now-a-days: the disease has vanished, the doctrine has been annihilated, and where is the use of thrice slaying the slain? Scrutator deals largely in denunciations of the “humbug,” the “ignorance,” &c. of the Boards of Health of that day, to all which we agree.

The treatment proposed is mightily old-fashioned, and not the better for being old: envelope the whole body and limbs in warm flannel blankets (are there any other kind of blankets?) heat an iron to 130 F. and pass it over the whole body, then rub those parts (body and limbs, we presume,) with mercurial liniment and strong ammonia, (here's a

mess!): during this operation give a mixture composed of tincture of opium, ditto of cantharides, ditto of hyoscyamus, black drop, carbonate of soda, tincture of rhubarb and camphor mixture (a prescription truly à la Huxham), with all which “one grain to 5 or 10 of calomel, and a few grains of camphor” may be taken. The author says, that no one should be allowed to practise medicine who is not “capable of grasping general principles.” Now, both his notions of the nature of cholera and his treatment, which is a treatment of individual symptoms alone, discover any thing but “a grasping of general principles.” We presume not to doubt his experience of cholera cases, but the practical deductions he has drawn from them do not very clearly appear. Withal the style is bad: the author is evidently unaccustomed to the oral or written description of disease: the symptoms are huddled together in a strange way, and under their head he speaks of fear as greatly predisposing to the disease—a cause among the symptoms! Scrutator must not be offended at our *acting* his *name* and *scrutinizing* his errors!

bered was identified with galvanism or electricity—not indeed collected into masses or cords, as in the nervous system commonly so called, but broken down and diffused—the “*materia vitæ diffusa*,” as opposed to “*coacervata*.” A similar view has been since adopted, under various modifications, by Fontana, Wolff, Rudolphi, G. R. Treviranus, Hiedmann, Thackrah, Grainger, Cooper, and many other physiologists; the majority of whom, however, do not indeed assert that the blood is alive, or even that it is *per se* endowed with vitality, but merely that it receives “a vital influence,” or “a vital impression” from the nerves or blood-vessels, which appears to be merely an evasive way of saying that it is neither possessed of vitality nor destitute of it. It is quite true that the blood, while in its proper vessels, whether in the course of circulation or not, resists coagulation for a somewhat longer period, as proved by Thackrah and Cooper, than under other circumstances; but it is not true that this more tardy coagulation implies that any “vital influence”—if by this is meant the slightest possible degree of vitality—has been imparted to it. There has been in the minds of many persons, since the time of Hunter, a kind of morbid association between the continued fluidity of the blood and its supposed vitality; and indeed Mr. Thackrah expressly says “the vital or nervous influence is the source of the blood's fluidity, and its loss the cause of

coagulation.” (On the Blood, 1834). Strange that, if this be the case, it should remain permanently fluid in most cases of sudden death; but the difficulty at once disappears if we regard both its continued fluidity and its coagulation under all circumstances as purely chemical phenomena. How the latter, regarded in this light, should be somewhat retarded when the blood is surrounded by still irritable parts, it will be time enough to attempt to explain when we can tell why fibrin coagulates at any time, and why so many other causes can at one time retard and at another accelerate this process. Every fair view of the matter seems to show that the blood—essential as it is to all the vital actions—is so only in one of two capacities, either as a material to work upon, as it has been already above represented, when it is no more entitled to be considered as possessed of vitality than the food in the stomach, or as stimulus to excite the working organs—that is to say, the heart and capillary system—as it will be represented in future, when it is no more entitled to be regarded vital than caloric or any of the other numerous stimuli to irritability. “No fact,” says Blumenbach—willing as he is to admit the possibility of fluids being possessed of irritability—“No fact has been adduced in favour of the vitality of the blood, which may not be more easily, simply, and naturally explained upon the contrary supposition.”

A NEW PRACTICAL FORMULARY

OF HOSPITALS, OR A

Collection of Formulæ of the Civil and Military Hospitals of France, Germany, Italy, Great Britain and Ireland, &c., containing the Indication of the Doses in which simple Substances, magistral and officinal Preparations of the Codex are administered, the use of New Medicines, and general receipts on the art of prescribing. By M. EDWARDS, M. D., and P. VAVASSEUR, M.D., of the Hospitals of Paris—1834. Translated and augmented by M. RYAN, M. D. &c. &c.

(Continued from p. 248.)

CHAPTER VIII.

MEDICINES WHICH ACT UPON CERTAIN GLANDS, AND UPON THE ABSORBENT SYSTEM IN GENERAL — ALTERATIVES, &c.

MERCURY.

ALL the mercurial preparations act in nearly the same manner. They exercise a stimulating influence over the economy, which may be carried to such an extent as to cause inflammatory action. They act in a remarkable manner on the organs of secretion, and especially on the salivary glands: they also augment the activity of absorption; when employed for a long time, these preparations cause a series of dangerous symptoms—a kind of scorbutic cachexy.

It is chiefly in the treatment of venereal diseases that mercurial preparations are most commonly used. They are also employed in chronic enlargements of the viscera, when not inflammatory, white swellings, &c. The action of mercury appears to be followed with good effects on the whole body in certain local inflammations, such as puerperal peritonitis, &c., and the English practitioners administer them daily in continued fevers, cholera, the yellow fever, plague, inflammation of the brain and its envelopes, hydrocephalus, &c. Preparations of this metal are also used externally in certain herpetic, scrophulous, and verminous affections.

[Calomel and opium are strongly recommended in inflammation of the peritoneum and pleura. I have ordered it in scruple doses, in puerperal and common peritonitis, combined with camphor and opium or morphia, when all other means had failed. I have also used it successfully in cases to which I was called by Dr. Kenny, of the Strand, Mr. Appleton, of Holborn, and others. Dr. O'Beirne narrates several cases of ulceration of the cartilages of the wrist, knee, ankle, and hip joints, successfully treated with mercury, in a paper read before the Surgical Society of Ireland, March 1834, and published in the *Dublin Medical Journal*, No. xiv. vol. 5, May 1834.—T.]

INTERNALLY. ʒij—iv to be taken every two hours in volvulus. (An uncertain remedy).

Decoction. ℥j to Oij of water. It should boil for two hours, and then be decanted. The dose is ʒss—ij daily, which is medicated with some mercurial particles: as an anthelmintic.

Mercuré Gommeux de Plenck. P. Mercury, ʒj, gum. acaciæ, ʒij, syrup of diacodium (poppy). ʒiv. Every ʒ contains a little more than gr. x of mercury. ʒi—ʒi daily, progressively, as an antisyphilitic.

Pilules Mercurielles Composées. P. Mercury, ʒj, triturated until its globules disappear, with honey, ʒxij; during the trituration, add socotorine aloes, scammony, āā ʒij, mace, canella, āā ʒij. Each pill of four grains contains a little less than a quarter of a grain of mercury. [This preparation differs very materially from the mercurial pill of the British pharmacopœias.—T.] Gr. xij—ʒi.

The Oguent Mercurial. P. Is sometimes administered internally in pills, in doses of gr. ij—iv daily; [but scarcely ever in this kingdom.—T.]

Powder of Mercury with Sugar. (Lagneau).

Rx. Hydrarg. purif. ʒij;
Sacchari, ʒss.

Tere simul donec globuli non amplius conspiciantur. Sumat, gr. x, omni mane ex cyatho infusi coffeæ.

In venereal diseases. Nine grains contain 4½ gr. of mercury.

Mercurial Syrup. (Lagneau).

Rx. Hydrarg. purificati, ʒi;
Gummi acaciæ, ʒi;
Syrupi endiviæ. q. s.

Tere simul donec globuli non amplius conspiciantur. Dosis cochlearia ij vel iv in die.

In venereal affections.

Mercury with Chalk. London.

Rx. Hydrargyri. purif. ʒij;
Cretæ præparatæ, ʒv.

Tere simul donec globuli non amplius conspiciantur, gr. iv—x adhibeantur quotidie vel bis in die.

Eight grains of this powder contain three grains of mercury. [This is a valuable medicine combined with rhubarb, aromatic powder, carbonate of iron, and sugar, in proper doses, in cases of delicate children, affected with scrophula, diseases of the mesenteric glands, atrophy, inflammation of the hip, knee, ankle, wrist, and elbow joints, when the alvine motions are brown or depraved. When the alvine dejections are black, I substitute calomel for the above mercurial preparation. The diet should consist of animal and vegetable jellies, and be as nutritious as possible. See the Translator's remarks on the diseases mentioned, in his work on Obstetricy, and in his edition

of Hooper's Physicians' Vade Mecum, 1833.
—T.]

Mercurial Pill. London.

Rx. Hydrargyri purif. 3 ij;
Conf. rosæ gallicæ, 3 iij;
Glycyrrh. rad. contritæ, 3 i.

Hydrargyrum cum confectione tere, donec globuli non amplius conspiciantur deinde adjectâ glycyrrhizæ radice; omnia simul contunde, donec corpus unum sit: gr. iij—vj sumendæ quotidie. [Mr. Abernethy, Dr. Wilson Philip, and others, most strongly advise small doses of mercurial or blue pill in various diseases. The latter gives many remarkable cases of cure effected by 1-24th doses of this remedy as an alterative. (On Small Doses of Mercury, &c. 1834; Abernethy on the Constitutional Origin and Treatment of Local Diseases. T.)

The *Mercurial Pill of the M. de Santé* does not differ from the preceding, except that the confection of roses and the mercury are in equal portions, and the liquorice omitted.

Pills of Mercury and Rhubarb. H. of England.

Rx. Pilulæ hydrargyri,
Pulveris rhei, ā ā 3 ij;
Aquæ puræ, q. s.

Divide in pilulas xxiv, quarum sumat unam vel duas quotidie vel bis in die.

Each pill weighing 6 grains contains gr. $\frac{1}{2}$ of mercury.

Pills of Mercury and Rhubarb. (Ryan).

Rx. Pil. rhei. comp. Ph. Edinb. 3 j;
— hydrargyr. Ph. Lond. gr. vi—x;
Olei menthæ pip. m v.

Fiat massa, in pilulas xv dividenda, quarum capiat unam bis vel ter in die.

[This is an excellent pill in dyspepsia, leucorrhœa, and delicate health, and if continued regularly for three or four weeks in the above, and in cases of bilious complaints, is of essential service. The dose should be increased or diminished, if the bowels act more than twice a day. Tonics are given at the same time.—T.]

Pilules de Belloste. H. des Ven.

Rx. Hydrargyri, 3 i;
Potassæ super-tart. gr. iv;
Scammonizæ gummi,
Jalapæ rad. cont. ā ā 3 i;
Syrupi simplicis, q. s.

Tere hydrargyrum cum aliis donec globuli non amplius conspiciantur. Divide in pilulas granorum, vj, e quibus capiat iij—vj quotidie.

Each pill contains gr. $4\frac{1}{2}$ of mercury. They are generally administered as purgatives.

Pills of Mercurial Ointment. H. de la Ch.

Rx. Unguenti hydrargyri, 3 ij;
Pulveris glycyrrhizæ, q. s.

Divide in pilulas clxiv quarum sumat unam ad sex in die.

In the treatment of venereal diseases.

Two hundred of these pills generally suffice for the treatment. Each of them contains gr. $\frac{1}{2}$ of mercury.

Mercurial Pills, called No. 3. H. St. L.

Rx. Unguenti hydrargyri fortis, 3 vj;
Saponis medicinali, 3 iv;
Amyli, 3 v.

Fiat massa, in pilulas granorum in distribuenda, e quibus capiat unam vel duas mane nocteque.

Each pill contains $\frac{1}{4}$ of a grain of mercury.

EXTERNALLY.

In *Frictions onguent mercuriel* called *Neapolitan*. P. Quicksilver and purified lard of each equal parts.

In *Frictions*—Grey ointment—Neapolitan ointment 25 parts, adeps 75. P. 3 ss—ij. 3 i—3 i, used in frictions in venereal diseases.

The *onguent mercuriel mitigé* of the H. des Ven. is composed of one part of mercury to eight of lard.

Emplâtre de mercure composé, or de Vigo. P. Employed in chronic enlargement of the glands of the groins, testicles, &c.

[In the last stage of puerperal or common peritonitis, and in all diseases in which we wish to affect the system with mercury, hydrocephalus, hysteritis, &c.; a drachm of the British ung. hydrar. fort. should be rubbed into each axilla every quarter of an hour alternately, until one or two ounces are consumed. Six or eight scruples of calomel combined with camphor, morphia, or opium, in the form hereafter mentioned, may be administered at the same time, unless vomiting exist. I have repeatedly succeeded in mercurializing the system by this method, when every other had failed. T.]

Emplâtre des quatre fondants. P. Any quantity.

Mercurial Injection. H. of Germ.

Rx. Hydrargyri, 3 j;
Gummi acaciæ, 3 ss;
Syrupi papaveris, q. s.

Tere simul donec globuli non amplius conspiciantur, dein adde paulatim.

Aquæ, 3 iij.

Fiat injectio cujus 3 i—3 ij utenda bis vel ter in die.

In gonorrhœa and Leucorrhœa.

[This is not much employed in this country. T.]

Mercurial Cerate. H. des Ven.

Rx. Unguenti hydrargyri, 3 ij;
Cerati simplicis, 3 ss.

Employed principally to dress venereal sores and ulcers.

Mercurial Pomade with Opium. H. de la Mat.

Rx. Unguenti hydrargyri
Cerati cum opio, ā ā p. e.

Misce.

Used in frictions twice or thrice a day on

the abdomen, a drachm at a time. It is employed with advantage in the last stage of puerperal peritonitis.

The *Onguent mercuriel opiace* of the H. des Ven. is composed of two parts of mercurial ointment, and one part of opium.

[This ointment is also combined with the preparations of iodine; as will appear hereafter. T.]

Mercurial Soap. H. de la Mat.

Rx. Unguenti hydrargyri, \mathfrak{z} iiss;
Solutionis sodæ, \mathfrak{z} iij.

Tere simul solutionem sodæ et unguentum.

Employed in frictions, in syphilis, scabies, &c.

Mercurial Digestive Ointment. H. des Ven.

Rx. Unguenti hydrargyri;
——— simplicis, $\mathfrak{a}\mathfrak{a}$ \mathfrak{z} iv.

Fiat unguentum.

Employed to stimulate and disperse chronic venereal swellings.

Mercurial Liniment. H. des Ven.

Rx. Unguent. hydrargy. fort.;
Liquoris animoniz, $\mathfrak{a}\mathfrak{a}$ \mathfrak{z} i;
Olei olivæ, \mathfrak{z} j.

Fiat linimentum.

Used to stimulate chronic swellings of a venereal nature.

[Enlargement of the mesenteric glands, hydrocephalus, &c. T.]

Liniment Hydrarg. Lond. & Dublin.

Rx. Ung. hydrarg.
Adipis præpar, $\mathfrak{a}\mathfrak{a}$ \mathfrak{z} iv;
Camphoræ pulv., \mathfrak{z} j;
Spiritus rectificat. \mathfrak{z} j;
Liquoris ammon. \mathfrak{z} iv.

The camphor is first to be rubbed with the spirit of wine, the ointment, lard, and ammonia added. T.]

DEUTO-CHLORURET—OR BICHLORATE OF MERCURY—CORROSIVE SUBLIMATE.

In doses of some grains, it is a most violent corrosive poison; in small doses it acts like the generality of mercurial preparations. It is frequently employed in venereal diseases, especially those of long standing. Its use requires great attention and care.

Subst. Incomp. Alkalies and their carbonates, the tartrate of antimony, the sulphate of potassa, the soaps, iron, copper, lead, mercury in astringent vegetables, &c.

INTERNALLY. Gr. 1-8th— $\frac{1}{2}$ in pills or dissolved in water.

Liqueur de Van Swieten. P. Sublimate, gr. viij; distilled water, \mathfrak{z} xivss; alcohol, \mathfrak{z} jss. \mathfrak{z} ij— \mathfrak{z} i, progressively, in \mathfrak{z} iv of a mucilaginous vehicle. Each drachm of this liquor contains 1-16th part of a grain of the bichlorate. The solution mercurielle, or liqueur de Van Swieten of the H. des Ven. contains about $\frac{1}{4}$ to a drachm. The dose ought consequently to be diminished.

Antisyphilitic Potion. H. of America.

Rx. Hydrargy. bichlorureti, gr. ij;
Aquæ, destillatæ, \mathfrak{z} iv;
Spiritus cinchonæ,
Syrupi simplicis, $\mathfrak{a}\mathfrak{a}$ \mathfrak{z} i.

Fiat mistura, cujus sumat cochleara duo magna bis, vel ter in die.

A spoonful weighing 5 drachms contains about 1-16th of the bichlorate of mercury.

The *Liquor hydrarg. oxym. Lond.* is of oxymur.—bichloruret of mercury, gr. viij, distilled water, \mathfrak{z} xv, rectified spirit, \mathfrak{z} j. \mathfrak{z} j contains gr. $\frac{1}{2}$ of mercury.

It is employed in obstinate syphilitic and cachectic diseases, with sarsaparilla.

Mixture of Bichloruret of Mercury. (Sir Astley Cooper.)

Rx. Tincturæ cinchon. \mathfrak{z} ij;
Hydrarg. oxymur. gr. j.

Sir Astley strongly recommends this mixture in disease of the mesenteric glands, and to substitute tincture of rhubarb, when the bowels are confined. It is given with a view to improve the secretions. The hydrarg. c. creta and rhubarb, are advised as aperients in such cases. I have ordered quinine in good sherry, and also carbonate of iron, both of which children usually take with avidity when sweetened. T.]

MERCURIAL ÆTHER. (Cheron.)

Rx. Hydrargyri deuto-chlorureti,
gr. xvi;
Ætheris sulphurici, \mathfrak{z} i.

Liqua. sumatur, \mathfrak{D} j— \mathfrak{z} ss. bis in die ex cyatho lactis.

A scruple of this solution contains 1-6th of a grain of the bichlorate.

Syrup of Mercurial Ether. (Cheron.)

Rx. Ætheris hydrargyri, \mathfrak{z} ij;
Syrupi simplicis, \mathfrak{z} viij.

Fiat syrupus, cujus sumat, \mathfrak{z} ss—i; ex cyatho lactis.

An ounce contains $\frac{1}{6}$ th of a grain of the bichlorate.

Pills of Bichlorate of Mercury. H. des Ven.

Rx. Hydrarg. bichlorureti, gr. v;
Amyli, \mathfrak{z} i;
Gum. acaciæ, \mathfrak{z} ss;
Aquæ puræ, q. s.

Fiant pilulæ xxxvi quarum capiat unam ad tres quotidie.

Each pill contains $\frac{1}{6}$ grain of the bichlorate.

Pills of the Bichlorate of Mercury. H. of England.

Rx. Hydrargyri bichlorat, gr. viij;
Hydrochloratis ammoniæ, gr. x;
Aquæ ferventis, \mathfrak{z} ij;
Micæ panis, q. s.

Divide in pilulas xl, quarum sumat unam vel duas in die.

Each pill contains 1-5th of a grain of the bichlorate.

Mercurial Pills, called No. 1. H. St. L.

Rx. Hydrarg. bichlor. \mathfrak{D} i;
Alcoholis, \mathfrak{Z} ij;
Micæ panis, \mathfrak{Z} iij;
Aquæ destillatæ, q. s.

Divide in pilulas clxiv ex quibus capiat unam mane nocteque, et deinde duas.

As *antisymphilitics*. Each pill contains $\frac{1}{2}$ of a grain of the bichlorate.

Mercurial Pills, called No. 2. H. de St. L.

Rx. Hydrarg. bichlor. \mathfrak{D} i;
Pulveris rhei, \mathfrak{Z} ij;
Croc. medicinal. \mathfrak{Z} ss;
Pulv. glycyrrh.
Syrup. flor. aurant. \mathfrak{a} a q. s.

Fiant pilulæ clxiv, dosis ut supra.

Each pill contains $\frac{1}{2}$ of a grain of the sublimate.

Antisyphilitic Pills. Hot. D.

Rx. Hydrargyri bichlor.
Extracti opii, \mathfrak{a} a gr. iv.;
———— cinchonæ, gr. c.;
Pulveris cinchonæ, q. s.

Divide in pilulas xx quarum sumat unam ad tres quotidie.

Each pill contains $\frac{1}{2}$ gr. of the bichlorate and opium.

Antisyphilitic and Antiherpetic Pills. H. de la Pitié.

Rx. Hydrarg. bichlor. gr. iij;
Extracti conii,
———— hyoscyam. \mathfrak{a} a gr. xviii;
———— de chrysanthemi, \mathfrak{Z} ss;
———— dulcamaræ,
Saponis duri, \mathfrak{a} a \mathfrak{Z} i.

Divide in pilulas lxxii é quibus una sumatur mane nocteque.

Every six or eight days one should be added to the dose.

Antiherpetic Pills.

Rx. Hydrarg. bichlorat. gr. ij;
Extracti aconiti, \mathfrak{D} i;
Pulveris aconiti. q. s.

Tere in mortario vitreo et divide in pilulas xxiv, quarum sumat unam mane nocteque.

The dose should be progressively augmented.

Employed in cases of syphilitic herpes, swellings of the lymphatic system, &c.

Each of these pills contains one-twelfth gr. of the bichlorate, and one gr. of the aconitum.

EXTERNALLY.—In frictions.

Pommade de Cyrillo. P. Sublimate 4 parts, adeps 32 parts. \mathfrak{Z} ss— \mathfrak{Z} i in frictions.

Lotions. Gr. vj—viij in a solution of \mathfrak{Z} ij of water.

Baths. Gr. x— \mathfrak{Z} j in Occ of water.

Gargles. Gr. i—ij in \mathfrak{Z} iv of a liquid.

Collyria. Gr. $\frac{1}{2}$ —1 in \mathfrak{Z} i of liquid.

Trochisques Escarrotiques. P. Sublimate 8 parts, starch 16 parts, mucilage of tragacanth, a sufficient quantity. Used for the

enlargement of the orifice of fistulous openings.

Mercurial Gargle. H. de la Ch.

Rx. Hydrarg. bichlor. gr. ij;
Aquæ destillatæ, \mathfrak{Z} iv;
Syrupi mellis, \mathfrak{Z} ss.

Misce.

Used in the treatment of angina accompanied with ulceration of the pharynx.

Antisyphilitic Gargle. H. of Italy.

Rx. Hydrargyri bichlor. gr. i;
Decocti hordei, Oj;
Mell. rosæ gallicæ, \mathfrak{Z} ss.

Fiat gargarisma.

Employed in syphilitic angina.

The Syphilitic Gargle of the H. des Ven. is composed of one gr. of the bichlorate and \mathfrak{Z} vi of the decoction of marsh-mallow.

Mercurial Enema. H. of America.

Rx. Hydrargy. bichlor. gr. vi;
Infusi lini, Oj.

Fiat enema.

Employed with advantage in cases of Ascariides.

The Liniment Antisyphilitic of the H. des Ven. contains only gr. ij of the bichlorate dissolved in \mathfrak{Z} ij of distilled water, to the same quantity of the same vehicle. It is sometimes employed in the treatment of venereal diseases, especially those of the rectum, when the stomach cannot bear the internal administration of the bichlorate. It is, however, an uncertain remedy.

Mercurial Collyrium.

Rx. Hydrarg. bichlor., gr. iv;
Aquæ rosæ, \mathfrak{Z} vi.

Fiat collyrium.

Employed in ulcerations of the palpebræ, and in chronic gonorrhæal ophthalmia.

Eau Ophthalmique Mercurielle. H. of Germ.

Rx. Hydrarg. bichlor. gr. ss;
Aquæ rosæ, \mathfrak{Z} iij.

Solve, et adde,

Mucilaginis, \mathfrak{Z} i;

Aquæ destil. lauro-cerasi, gutt. xxx.

Misce.

Used in venereal ophthalmia.

Collyrium of Conrad. H. St. Ant.

Rx. Hydrarg. bichlor. gr. j;
Gum. tragacanth. \mathfrak{D} i;
Liquoris opii, gutt. xvij;
Aquæ rosæ, \mathfrak{Z} iv.

Fiat collyrium.

Employed in certain chronic ophthalmia, especially those dependent on syphilis.

Mercurial Injection with Opium. H. des Ven.

Rx. Hydrarg. bichlor., gr. vi;
Aquæ destillatæ, Oj;
Liquoris opii, \mathfrak{Z} ss.

Fiat injectio.

In syphilitic ulcerations of the genital organs, especially in women.

Detersive Injection. H. of Italy.

R_x. Hydrarg. bichlor., gr. ij ;
Decocti hordei, Oj ;
Tinct. myrrhæ, 3 i.

Misce.

Employed in cases of caries of the bones, dependant on constitutional syphilis.

Mercurial Lotion, or Eau Rouge. H. St. L.

R_x. Hydrarg. bichlor. 3 j ;
Aquæ destill. Oj ;
Anchusæ, q. s.

Fiat lotio.

Used with success in the treatment of herpes, not inflammatory, and especially that of a syphilitic nature. The diseased parts should be bathed with compresses dipped in this fluid.

Camphorated Mercurial Solution. H. of Germ.

R_x. Hydrarg. bichlor. 3 ss ;
Camphoræ, 3 i ;
Spirit rectif. 3 i.

Misce.

This liquor is used in syphilitic condylomata.

Mercurial Bath. M. de Santé.

R_x. Hydrarg. bichlor., 3 ij—3 i ;
Aquæ, Occ.

This bath is used in treating venereal cases when the internal administration of the bichlorate cannot be depended on. In general thirty baths are sufficient ; the quantity of the bichlorate should be gradually increased from 3 ij—3 i.

The Antisyphilitic Baths of the H. des Ven. contain only from 6 to 12 gr. of the bichlorate previously dissolved in distilled water. They are not often prescribed.

PROTOCHLORIDE OR CHLORURET OF MERCURY—CALOMEL.

In moderate doses, calomel is a purgative ; but in smaller ones it acts in the same manner as other mercurial preparations. This preparation of mercury is the one most commonly used, especially in England.

Substan. incomp. Alkalies, lime-water, the sulphates of potass and antimony, iron, copper, &c.

INTERNALLY. As a purgative, gr. v—xv in pills. As an alterative, gr. i—v daily.

Powder of Calomel. (Swediaur.)

R_x. Hydrarg. submuriatis, gr. vi ;
Amyli, gr. xij ;
Sacchari, 3 ss.

Misce pro dosi.

An aperient.

[It is usually combined with jalap ; the compound powder of jalap or rhubarb in the United Kingdom. T.]

Anthelmintic Powder. (Hôt. D.)

R_x. Hydrarg. submur. gr. ij ;
Pulveris rhei, gr. vi ;
——— jalapæ, gr. xxx.

Fiat pulvis.

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This powder may also be used as a slight purgative.

[Ginger or cinnamon powder should be combined with it. T.]

[Alterative Powders. (Ryan.)]

R_x. Hydrarg. submur. gr. vi—x ;
Pulveris rhei, 3i—3 ss ;
——— cinnam. comp. 3ss—3j ;
Sacchari purificat. 3 ss ;
Pulveris cretæ, c. cum opio. gr. xv in ch. vi vel viij. Dosis una mane nocteque.

These powders will be found efficacious in the cases of infantile remittent fever, in mesenteric disease, in scrophula, rickets, and all diseases in which the alvine motions are dark and offensive. The dose must be increased or diminished, according to the effect on the bowels. T.]

Calomel Powder with Opium. H. of Germ.

R_x. Hydrarg. submur. gr. vi ;
Opii, gr. ij ;
Sacchari, 3 i.

Divide in chartulas vi, quarum sumat unam, quartâ parte horâ.

As an aperient.

Plummer's Alterative Powder.

R_x. Hydrarg. submur., unam partem ;
Sulph. antim. præcip., duas partes.
Fiat pulvis, gr. vi—x quotidie sumenda.
In scrophulous venereal diseases.

The Poudre de Plummer of the H. St. Ant. contains equal parts of calomel and of the hydro-sulphate of antimony, and a part and a half of sugar. It is used in the same cases as the preceding.

Calomel Pills. H. de la Ch.

R_x. Hydrarg. submur.,
Pulveris althææ, ā ā gr. viij ;
Syrupi simplicis, q. s.

Divide in pilulas iij, ex quibus sumat unam quartâ partē horæ.

As an alterative.

[Two grains of calomel with a sixth or a fourth of a grain of opium are made into a pill, and exhibited every hour, or every second hour, in inflammation of the bowels, peritoneum, pleura, uterus, and in gangrene, with the best effects. Mr. Boyle advised scruple doses of calomel in his work on syphilis ; but Dr. James Johnson is entitled to the merit of having first used such doses in India. (On the Diseases of Tropical Climates). Dr. Cartwright, an American physician, employed scruple doses in syphilis, fever, disease of the liver, acute and chronic, dysentery ; and states that he never saw any bad effects produced by them. He ordered a scruple of calomel and four grains of rhubarb, every night, an aperient draught next morning, if necessary ; and he continued the remedy for twelve or sixteen successive nights. Salivation was not produced, but there was tenderness of the gums, with

mercurial odour. A patient may be cured of syphilis by this plan, without being aware of taking mercury, and without any of its bad effects. (*Medico-Chirurgical Review*, 1826).

Dr. Musgrave has exhibited large quantities of calomel, from five to six hundred grains, in repeated doses, with success, in the fever of the West Indies, combined as hereafter mentioned (*Edinb. Med. and Surg. Journ.* 1827, vol. 28); and the medicine has since been pushed to this extent in malignant puerperal fever, in the majority of instances, with the happiest results. I have known it succeed in two cases considered hopeless, accompanied by coffee-coloured vomiting, cold extremities, &c., mercurial ointment, having been freely rubbed into each axilla at the same time, and the vomiting stayed by the effervescing mixture with opium; but I have known it to fail in similar instances.

Dr. Musgrave divides two scruples of calomel and one of camphor into twelve papers, and has given in successive doses 500 grains of the former in this combination. In his opinion, the camphor facilitates the action of the calomel. I have known fatal hypercartharsis caused by a scruple dose of calomel alone, and therefore combine it as follows, in malignant puerperal fever, peritonitis, &c.

Rx. Hydrarg. submur. \mathfrak{Dj} ;
Camphor. pulv. gr. v;
Morphiæ acetatis, gr. $\frac{1}{2}$.

Fiat pulvis, singulis, secundis, vel tertiis horis sumendus.

In extreme cases we must use extreme remedies. I have known a pound of mercurial ointment used in repeated frictions in malignant or blue cholera, without any effect.

The above combination was taken by a patient of mine, affected with syphilis, for nine successive nights, until the gums became tender, which never happened before, though he took oxymuriate of mercury by the advice of two of the most celebrated surgeons in this metropolis, without producing the same effect; and I may add, that the chemist who compounded my prescription was so terrified at the dose, that he marked the packet of powders "Poison—one ordered to be taken at bed time." He was, however, a false prophet, as my patient got speedily well. T.]

Compound Calomel Pills. H. of England.

Rx. Hydrarg. submur.
Antim. sulph. præcip. $\mathfrak{āā}$ 3i;
Guaiaci gummi, 3ij.

Tere et adde,
Mucilaginis acaciæ, q. s.

Divide in pilulas gr. v, capiat unam vel duas in die.

In constitutional syphilis, cutaneous diseases, &c.

Each pill contains about gr. ij of calomel,

and the same quantity of sulphuret of antimony.

Compound of Soap Pills. H. de la Ch.

Rx. Hydrarg. submur.
Jalapæ resinæ,
Saponis medicinalis, $\mathfrak{āā}$ 3i.

Fiat massa, in pilulas granorum iv distribuenda, quarum capiat duas singula semi hora donec alvus soluta sit.

Each pill contains about gr. $1\frac{1}{2}$ of calomel.

The *Pilules Fondantes* of the same hospital are composed of equal parts of soap and calomel, and do not contain the resin of jalap. Three or four are given daily, as alteratives.

Compound Pills of Calomel and Ipecacuanha. H. of England.

Rx. Hydrarg. submur. gr. v;
Pulv. ipecacuanhæ, gr. x;
Conf. rosæ gallicæ, q. s.

Divide in pilulas x, quarum capiat unam ad tres quotidie.

Pills administered in Dropsy. H. de la Ch.

Rx. Hydrarg. submur. gr. viij;
Pulv. scillæ,
—— rhei, $\mathfrak{āā}$ gr. iv;
Syrupi, q. s.

Fiant pilulæ in die, capiendæ.

[Sir Astley Cooper has found the best effects from a pill composed of one grain of calomel, or two of mercurial pill with three grains of squill, every night, or every other night; and the following mixture during the day:—

Rx. Misturæ camphor. \mathfrak{z} iss;
Ammon. carbon. gr. vij—x;
Spiritus æther. nitros. 3j;
Tincturæ digitalis, mxx.

Sit haustus bis in die sumendus. T.]

As Diuretics.

Pilules Suedoises. Hôt. D.

Rx. Hydrarg. submur. 3iss;
—— sulph. nigri,
Hydrosulph. ammoniæ, $\mathfrak{āā}$ 3i;
Micæ panis, q. s.

Fiat massa in pilulas cxliv distribuenda; é quibus ij—iv quotidie sumendæ.

As antisiphilitica.

Each pill contains gr. $\frac{3}{4}$ of calomel.

Antisiphilitic Pills. H. St. L.

Rx. Hydrarg. submur.
Guaiaci resinæ, $\mathfrak{āā}$ 3ij;
Pulveris althææ, 3iv;
Syrupi cydoniæ, q. s.

Divide in pilulas granorum iv, quarum sumat iv—vj in die.

Each pill contains 1 gr. of calomel.

Antisiphilitic Opiate.

Rx. Hydrarg. submur. 3ij;
Opii purific. xiv;
Confectionis rosæ, 3iv.

About the size of a bean of this opiate should be taken in the morning fasting, and

a cupful of the decoction of guaiacum should be administered immediately after each dose, to prevent salivation. Many practitioners prescribe a purgative every fifth or sixth day whilst this medicine is employed.

Laxative Boluses. H. de la Mat.

Rx. Hydrarg. submur. gr. xij;
Magnesiæ sulphatis, gr. xvi;
Syrupi rhamni, q. s.
Fiant boli iv sumantur in die.

Vermifuge Bolus. H. de la Mat.

Rx. Hydrarg. submur. gr. ij;
Seminis santonia, gr. viij;
Camphoræ, gr. vi;
Syrupi simplicis, q. s.
Fiat bolus.

Purgative Pastiles.

Rx. Hydrarg. submur. gr. vi;
Chocolatæ, ʒi.
Fiat trochisci é quibus capiat unum omni nocte.

Very useful to purge infants.

EXTERNALLY. In frictions on the gums, gr. ʒ—i, as an antisyphilitic.

[A better mode of curing new-born infants of syphilis is to exhibit mercurial pill to the mother, or to the infant, in extremely small doses. The first method usually succeeds, and is the safer. T.]

As a topical application, in a pommade, &c.

A Dry Collyrium. H. St. Ant.

Rx. Hydrarg. submur.
Sacchari, ʒ ʒ gr. xx;
Opii purif. gr. iv.

Misce.

[Cujus parum infletur, ope calami, in oculum affectum, semel vel bis in die. T.]

Employed in chronic ophthalmia.

[This practice was often tried by the late Baron Dupuytren, but is not employed in this country.

Daily experience convinces me that the preparations of nitrate of silver, sulphate, copper, &c., are too freely and indiscriminately employed, and do infinitely more harm than good. Cases treated in this way for two years and a half, have fallen under my care; vision was nearly destroyed; the corneæ were nebulous, the eyelids villous; and these disorganizations yielded to mild astringents, such as rose-water, liquor plumbi. acet. dilut., or sulphate of alum, and liq. opii sedat., or to a lotion of three grains of hydriodate of potass to each ounce of rose-water, with ʒss—i of the liq. opii sedativ. Such cases have been repeatedly seen at the Free Hospital and Western Dispensary, by numerous medical students, and some of them are now under treatment and being relieved. The old practice of blowing burnt alum, &c., into the eye for pearl or opacity obtains with quacks and farriers; but with few well-educated medical practitioners in this country. T.]

Honey of Calomel. (Swediaur.)

Rx. Hydrarg. proto chlorureti, ʒi;
Mellis, ʒi.

Misce.

Employed in venereal ulcerations of the throat and the genital organs.

Resolvent Pommade. H. Dieu.

Rx. Hydrarg. submur.
Pulv. scillæ, ʒ ʒ ʒss;
Adipis, ʒij;
Olei rosæ, gutt. iv.

Fiat unguentum.

Employed in frictions in cases of chronic enlargement of the articulations.

Anti-herpetic Pommade. H. de la Ch.

Rx. Hydrarg. submur.
Sulphuris, ʒi;
Adipis præp. ʒi.
Fiat unguentum.

Pommade used in the Treatment of Tetters.
Hôt. D.

Rx. Hydrarg. submur. ʒij;
Ung. rosæ, ʒij.

The *Pommade Fondante* of la Char. differs from the preceding. It is composed of equal parts of calomel and cerate. It is chiefly employed in frictions on the abdomen in engorgement of the liver.

[The ointment of the hydriodate of potass, of the proto-ioduret of mercury, or other iodureted preparations, which will be hereafter described, are much more efficacious.

The proto-chloride or chloruret of mercury, commonly called calomel, has long been used in venereal and liver complaints, in thoracic and abdominal inflammations, combined with opium, in scrophula, rickets, and enlargement of the mesenteric glands, in combination with rhubarb, opium, or cicuta; in dropsies with squill, foxglove, compound powder of jalap, and elaterium; and in rheumatism and obstinate cutaneous diseases with antimonials, guaiacum, sulphur, and other sudorifics. It may be observed, that children bear much larger doses of calomel than adults. Professor Hamilton, of Edinburgh, exhibited 180 grains to an infant under two years of age in croup, and others have pushed it much farther in hydrocephalus. The late Dr. Darwall, of Birmingham, inveighed in strong terms against the common custom of exhibiting calomel for a long time in cold weather to children; but I have never observed bad effects from it, when administered as an alterative in the coldest weather. It is seldom necessary, according to my experience, to continue it, in the fevers, in combination with rhubarb, jalap, &c., inflammatory or cachectic diseases of infants, longer than two or three weeks; and I have not as yet seen any bad effect produced by it.

It is a medical, as well as a vulgar error, that cold drink is prejudicial during the use of this remedy. Experience has long since

convinced me of the opposite opinion. I have never seen bad effects ensue from the use of cold water, barley water, milk and water, tea, &c., given to infants and children, in infantile remittent fever, or what is popularly termed "fever from teething, worm fevers," &c., during the administration of calomel, or chalk with mercury; and every pathologist will perceive the reason, which I cannot attempt to explain in a work of this kind.

There is an external application of calomel which must not be forgotten. It is the *lotio nigra*, or black wash of surgeons: 3ij of calomel to Oj of lime water. This is applied to chancres, excoriations, and to the prepuce of the glans of the clitoris in female children affected with a purulent discharge (Sir A. Cooper), which is not gonorrhœa (Sir A. Cooper, Professors Hamilton, Burns, Dewees, &c., &c.)

The *lotio flava*, or yellow lotion, is now seldom employed, and is composed of bichloruret, or oxymuriate of mercury (corrosive sublimate), gr. xv, and liquor calcis (lime water), a pint. It was used in venereal and scrophulous ulcers, and cutaneous diseases. T.]

(To be continued).

LETTER ON HOSPITALS AND DISPENSARIES.

Addressed to H. Warburton, Esq., M. P.

March 2nd. 1835.

SIR—From a firm conviction that you are determined to devote much of your attention to the prosperity and happiness of your country, and that all evils will be duly probed, with a view to their extinction, I am induced, without circumlocution, to state, that the receiving rooms of the hospitals, dispensaries, and parochial infirmaries of the metropolis, are daily and hourly receptacles of infectious and contagious diseases of the most inveterate character, such as scarlatina, measles, small-pox, hooping cough, besides many other cutaneous diseases of the most disgusting and infectious character. My great object is to bring under your active and discerning mind the fact of these contagious and infectious diseases being often fatally conveyed from these receiving rooms into the bosoms of noble, wealthy, and highly respectable families, as well as into schools of every description, by the domestics thereof, who frequent such receiving rooms for relief from disease, or by the friends of these domestics with whom such may hold intercourse.

Small-pox, scarlatina, measles, and other contagious maladies often make their appearance in families and schools, and no one acknowledges the source from which

they have originated; but the above short recital will come painfully home to many who have suffered under this direful and destructive system. These receiving rooms as at present conducted, are to be regarded as the centres from which fatal diseases are often disseminated over the metropolis; and while these arrangements inflict misery on the community, they fill the coffers of the profession and particularly those of the hospital departments.

Had the presidents and fellows of the College of Physicians and Surgeons been as faithful guardians of the public as they have been assiduously attentive to their own interests, the hydra, small-pox, would have been long ago strangled, but the *auri sacra fames* prevailed over the duties of humanity, and these evils still continue in full force, and are hidden from the public eye by being erroneously associated with benevolence and charity.

Many lives would be in future saved in every grade of society, as well as serious expense avoided, if it were directed by the legislature that patients labouring under contagious diseases of the nature delineated should not be carried through the streets, or allowed to enter the receiving rooms of hospitals, dispensaries, and parochial infirmaries, but that such cases should be attended at their own abodes. An arrangement of this nature would be worthy of the humane character to whom they are addressed, as it were in vain to expect aid from the College of Physicians, whose rapacity and vanity absorb all other considerations. Under this evil genius, the real utility and advantages of our hospitals and public medical institutions have been nearly annihilated; and hence the great inferiority of this country in anatomy, physiology, pathology, chymistry, and hospitals, when compared with the Continent at large, but particularly France; and these evils are much augmented by the absurd divisions and restraints existing in the profession, originating in pride, avarice, and other follies and vices. A foreign writer of great talent and humanity, regards our hospitals as a species of joint-stock-jobbing corporate bodies, of the rotten borough kind, and conducted as he states, with "Fierté," and from which those actually destitute derive little or no advantage as a letter must be obtained before admission. This system is bad and disgraceful—*Delenda est Carthago*. The money taken from the pockets of young men by the College of Surgeons, in the capacity of examiners, the members of the said College having previously received large sums from these young gentlemen for instruction, is most disgraceful.

What would be thought of the goldsmith or merchant, or tradesman of any description, who not content with being amply paid even beforehand for their goods, should demand an exorbitant price for the

invoice which recorded qualities? These examinations, and diplomas consequent thereon, should be conferred gratuitously by the universities and schools where such gentlemen have studied.

This would remove the strong objection to the Universities examining their own pupils; and these examinations should be open to the profession at large. The intrigues of the Colleges have rendered our Medical Institutions and hospitals comparatively useless, as instead of being rich in genius and talent, and thereby possessing the power of conveying useful information to the medical student, as to the cure of disease, they are to be regarded as a corporate puddle, more likely by their example to defile, than to give a generous impulse to the rising generation.

Such a junta, strangers to virtue, cannot be much longer allowed to insult an enlightened community and liberal profession. The hospitals of the metropolis they have deprived of the character of charitable institutions, as no individual, however severely afflicted with disease, can obtain admission, as the result of these afflictions. Such is not the case in Paris, as any individual presenting himself at one of the hospitals, labouring under disease, receives immediate admission if the case should require it. In former times, no one, however ignorant, who could command the examination fees, was rejected by the College of Surgeons, and these went forth as so many lion's providers for the hospital surgeons, as in all cases of difficulty they were sent for, as the result of the incapacity on the side of the newly made surgeon; and hence fatal and dangerous delay as well as expense were incurred. In conclusion, let me observe that the Colleges of Surgeons and Physicians are a hive of old sinners, whose crimes spring from avarice, which never fails to deaden every elevated and tender sentiment common to our nature. A death-bed repentance is not to be looked for—none of the old leaven must be left to infect the pure institutions that are likely to arise out of the late investigations. Stern necessity, not severity, requires that the Warburton knife should be applied with a free and determined hand, so that their multiplied deformities may be not only subdued, but utterly extirpated.

I have the honour to be, Sir,
Your obedient Servant,
CELSUS.

H. Warburton, Esq., M. P.

—o—

MEDICAL OFFICERS AT NEWCASTLE-
UPON-TYNE.

To the Editor of the Original London Medical
and Surgical Journal.

SIR—In accordance with the postscript to my last letter, I now proceed to the consi-

deration of the present state of our Dispensary. The only circumstance connected with its general management, on which I shall make any comment, is, that patients to be admitted to the benefits of the charity must provide themselves with a letter, "signed by a Subscriber, and addressed to the House-Apothecary." Although this system of recommendation is not limited to the Newcastle Dispensary, it is one which in many respects is objectionable. In the first place, in many serious cases of acute disease, much valuable time is lost; secondly, the persons so recommended very frequently are not objects of charity, but, on the contrary, are capable of remunerating the private practitioner. In the case of acute disease, the opportunity of arresting its progress is utterly lost; and, in the last, a double injury is produced, first, to the institution itself, secondly, to the private practitioner. No one can be more perfectly convinced of the utility of dispensaries than I am; but experience has proved to me, that by this system of recommendation, many real objects of compassion are deprived of their benefits, and many are substituted for them who ought to be considered as inadmissible. The only recommendation, in my opinion, ought to be the combination of poverty and disease. I shall now offer a few remarks on the "Medical Economy of the Establishment." The Dispensary has "six physicians, one surgeon, and a resident surgeon and apothecary;" there being neither consulting physician nor consulting surgeon. This last remark is made in consequence of the physicians being, *strictly speaking*, all consulting officers, as will appear from the following extract from the Dispensary Report:—"In acute diseases, especially in fevers, it will be necessary for the physicians to visit patients frequently; and, in the intervals, the surgeon and apothecary of the institution should also visit them as often as their cases may require." This rule I know to be most scrupulously attended to by at least a majority of the physicians of the institution, and, no doubt, has the advantage of saving them a great deal of trouble; whether it is one which tends to the advantage of the patients, appears to me to be a question of some importance, and, consequently, deserving consideration.

The physicians of the Dispensary alternately receive patients, who, when able to do so, attend on "stated days and hours at the Dispensary only." In cases where patients are able to do this, the present system may answer very well: but not so where the disease is of such a nature as to confine the patient at-home; and here it is that the evil of the rule quoted operates. To be convinced that such evil is not imaginary, I shall suppose a case of serious disease, and, perhaps, not well defined in its character; it is seen by the physician, who turns it over to the surgeon or apothecary, for days, and,

perhaps, does not again see it unless requested to do so, in consequence of some "material change which may require the more immediate attention of the physician." Every professional man must be ready to acknowledge the disadvantage which arises from a plurality of medical attendants in any case, except where met together for the purpose of consultation; and yet we find that this is sanctioned by the rules of the Dispensary, and acted up to by the physicians. In all well-regulated medical institutions, we find that the medical officers are divided into "consulting" and "ordinary." The duty of the former being to consult with the latter, when called upon so to do; and where a further division exists, as "physicians" and "surgeons," it is generally understood that the one class attends to "medical," the other to "surgical cases." But by the rules of the Dispensary all these distinctions are set aside, and the surgeon has to attend to the cases admitted, and which ought to be attended by the physicians. What is the effect of this in our Dispensary? It is simply this—the whole onus of the ordinary duties of the institution devolves upon the surgeon and resident surgeon and apothecary. This is a state of things which ought not to continue; the prosperity of the institution and the welfare of its patients demand a change. And if the physicians, who are at present connected with the Dispensary as ordinary officers, cannot, from their duties as private practitioners, dedicate a sufficient portion of their time to the public duties which they have imposed upon themselves, it is to be remembered by the Governors of the Dispensary, that in Newcastle there are several junior physicians, who are both *able* and *willing* effectually to discharge such duties to the Dispensary. When I write the last part of the preceding sentence, I am aware that the "cuckoo song" may be resorted to, viz.: that it is better to have "men of experience" connected with public institutions. In reply to the vague and frequently misapplied term, experience—I would ask in what experience consists? Is that man experienced who sees a great number of patients daily, and who, perhaps, *has not time to reflect* upon one? Such does not, in my opinion, constitute experience. In this dissent from the common mode of estimating experience, I am borne out by high authorities; but shall content myself with vindicating the claims of young practitioners, by an appeal to one of the highest authorities and brightest ornaments in our profession. The following are the words of the late celebrated Dr. Gregory: "But mere standing or seniority, superadded to the most complete and regular education in the profession, will neither procure confidence from the public, nor success and employment to any person. We are well accustomed to see many juniors surpass and deservedly surpass their seniors—perhaps even

their own instructors—and leave them so far behind, that before half their race is run, they can have no farther hopes of success." Again, "Some individuals soon shew by their talents, and the use which they make of them, that they can profit more by seven years of observation and experience, than others could do in the longest life. And very many soon shew that they are incapable of improving." &c. &c.* It would be well for more than one public institution with which I am acquainted, if the foregoing extract were printed in large characters, and placed in the committee rooms of the governors of such establishments. In conclusion of this communication, I may state, that, so far as I know, the Dispensary has not a single pupil, except the apprentices of the institution. No lectures or other species of instruction are given at the Dispensary; and in this way the advantages to be derived from the experience of two thousand eight hundred and fifty-two cases, have in the last year been lost to the medical students of Newcastle.

I shall continue this subject at an early opportunity, and have the honour to remain,

Sir,

Your obedient Servant,

GEORGE FIFE, M.D.

—o—

MR. DYER ON WATER DRESSINGS.

To the Editor of the Original London Medical and Surgical Journal.

SIR—In making a few remarks upon the paper of Mr. Wilson, contained in your Number of last Saturday, I trust I shall not be accused of doubting the efficacy of water dressing in many cases of ulcer, &c. I should have been glad had Mr. W. been more specific in his account of the particular kinds of sores in which he had seen water dressing successful; for it is admitted on all hands that there is a number of local diseases depending upon constitutional causes, which will not get well by any local treatment. That the Author of good and evil has given us a sufficient remedy for every case, I cannot doubt; but we lack the requisite knowledge to apply it with success, and ever will, unless we attend closely to the minute shades of difference exhibited by disease in different individuals. The following paragraph is a heavy tax upon my credulity. "It was probably the mere physical effects of water that were exercised in the cure of *Nahman* the Syrian, when he was ordered by the prophet *Elias* to 'go and wash seven times in Jordan.'" It would be no difficult thing to account for every manifestation of God's power recorded in the old Testament, on this same plan of "physical effect," and thus at once

* Dr. Ryan's Manual of Medical Jurisprudence, pp. 63-4.

undermine the whole fabric raised to witness the omnipotence of Jehovah.

M. W. evidently believes that the healing of the Syrian Captain took place as described, but that it was caused by the physical (medicinal?) effect of the water, and not by the power of the Lord given to this prophet. Does he also believe that water ordinarily will cure leprosy (*lepra vulgaris*), by dipping in it seven times; or is he aware that Jordan possessed peculiar properties? Does he know one river in the present day that will heal the leprosy. We occasionally see a mild disease compared with that which visited the Syrians, Arabians, and Jews of old. If he knows there is such a water, the discovery will immortalize his name; and if he does not, it appears to me injudicious to wrest a scriptural text from its original intention, in support of a doctrine with which it has no connexion. The object of Elisha in healing Naaman was to make known the might of God, and to give another proof of it to the unbelieving Jews. If it is believed that the leper was cured by the means pointed out, there is no reason left to doubt the fact that Gehazi was punished; and surely He who could cause disease by his word, could also take it away. Had the proud Captain of Syria gone and tried the virtues of his Abana and Pharpar, despising Jordan, he would have found his leprosy still remain, and would have discovered that God works by means, but that he will have the means appointed by himself. The Pool of Bethesda would have had no virtue to those who rushed into it at any season, but they who believed that an angel came down at a certain period and troubled the water—believed, also, that there was one who could give the angel power to render the fluid sanative. It was faith that made him whole who first stepped in—that faith which “can remove mountains.” Doubtless Elisha could by a word have healed Naaman, but he preferred to make trial of his faith, and to see it proved by his using the simple plan he had propounded.

I anticipate much pleasure, and not less profit, from the second contribution of Mr. W. to your valuable pages. I trust he will not be sparing of his cases; they are like water, invaluable, and worth a ship-load of theories.

I am, Sir,

Your's obediently,

JOHN C. W. DYER.

10, Mount Row, Liverpool Road,

March 23rd, 1835.

—o—

The London Medical

AND

Surgical Journal.

Saturday, March 28th, 1835.

ESTABLISHMENT OF A BOARD IN LONDON FOR CONFERRING MEDICAL DEGREES.

It is at length determined that a board shall be constituted in London for conferring medical degrees. The restriction of this power to the London University and King's College, would involve the ruin of other schools of prior institution, and at least equal utility. Mr. Took has therefore abandoned his intended motion in favour of the University, and Mr. Warburton, though a zealous friend to that institution, has declared himself opposed to investing it with any exclusive privilege.

We have good reason for believing that the board about to be formed will be composed of a certain number of members of the Colleges of Physicians and Surgeons, and of lecturers from the several established schools, to be elected by ballot immediately before the commencement of the examinations—which will probably take place some time during the summer. Such an arrangement will secure the competency and fair election of examiners, and emancipate the student from all fear of favouritism, since the teacher and pupil will be mutually ignorant of the relation in which they may in future be placed as examiner and candidate. This is, perhaps, on the whole, the best plan that can be adopted; though the necessity for having recourse to it, and the difficulties attending its adjustment, reflect deeply on the public neglect of learning and science in this metropolis, where the “*amor sceleratus habendi*” seems for centuries to have engrossed the attention, nay absorbed the very souls, of men. All the great continental capitals have long had their universities protected by government, sanction-

ed by time, and adorned with the names of men illustrious in literature and science; while in this proud and great, but in many respects semi-barbarous land, two country boarding schools have been allowed to restrain all academical honour within their own precincts; and though it were unjust to deny that they have fostered some of the finest of human minds, it is equally true that they have greatly retarded the general progress of knowledge and civilisation, by the cultivation of classics and mathematics to the exclusion of other studies quite as important, and by instilling an illiberal and bigoted spirit into the minds of our youth. What is more to the present purpose, they have exerted a paralysing influence on medicine, by their supine indifference to the science—by the inadequacy of their education—and the worthlessness of their degrees.

What has been the result of all these things? That which legislation has omitted to frame, the wants of society have called into being, though in an imperfect form; and if no *Alma Mater* rears her venerable head in the metropolis of the world, the “disjecta membra” of one lie scattered over its vast extent. A *diffused* university, if we may be allowed the expression, has been formed of various insulated schools, which, however, mar each others’ utility by their mutual jealousies and conflicting interests.

It is to be hoped that the construction of such a board as that in contemplation may go far, if not to unite them into one body, at least to animate them with one spirit; and it may, we think, be expected eventually to conduce to what has been laughed to scorn by many, but what will inevitably take place at last—the establishment of *one Medical Faculty*, and the obliteration of those relics of by-gone and benighted times, distinct Colleges of Physicians and Surgeons. It will of course instantly dry up that recent and contemptible

spurt from the fountain of insolence, the Rhabarbarian Fraternity.

We do not know what will be the precise nature of the degrees given by the new board—whether there will be separate degrees in physic and in surgery, or whether the two will be united; but we would strongly recommend that the candidate, after a full and fair examination in every branch of medicine, should be constituted a Doctor of Physic and Surgery. The existing corporations may attempt to prevent the new graduates from *practising* in virtue of their degrees; but in such a case we would advise both them and all other members of the profession, to set the corporations at open defiance. The local privileges by which certain bodies are now enabled to arrest the career of the medical practitioner every time he changes the place of his abode, by obliging him to pass idle and vexatious examinations, and to neglect his practice for the purpose of cramming his brains with school-boy nonsense, which he has long forgotten and will forget again—all this we say is a nuisance so intolerable, that it ought at once to be flung off with a resolute hand. If the members of the profession henceforth act with proper spirit, the power of the corporations will become merely nominal.

A contemporary of ours, remarkable *late ly* for reforming zeal, and *always* for consistency, exults at the bad success of the university “scheme of dealing in medical degrees.” We for our own part are equally rejoiced at the miscarriage of the Pall Mall “scheme,” the result of which would probably have been, that the College, seeing it was all up with the abstract dignity of the fellowship, would have solaced itself with tangibilities, and, converting the Temple of Æsculapius into a diploma shop, similar to that in Lincoln’s Inn Fields, would have dubbed Doctors as fast as the Doctors would pay for being dubbed.

Before quitting this subject, we may be allowed to express a hope that the new arrangements will involve some more liberal regulations respecting the qualification of teachers. Our readers are aware that we regard the whole system of *certificates* as essentially bad, and think that *knowledge*, no matter how or where acquired, ought to be the only thing demanded from the candidate; but if the old system is to be kept up for a while, we trust that the qualification of lecturers will be determined by some juster criterion than at present. With regard to the recognition of surgical lectures, the question has hitherto had no reference whatever to a man's talents or acquirements, but simply to his being one of the *twenty-two*, or one favoured by that august oligarchy; with regard to the recognition of lectures on the practice of physic, the question has been, whether the aspirant was a fellow of the College of Physicians—which ought to have been anything but a recommendation—or a licentiate of the same body; the latter involving a species of degradation to which men indued with the smallest self-respect have always submitted with extreme reluctance.

We cannot easily conceive how an individual who has knowledge sufficient for the *practice* of his profession, can be deficient in the knowledge requisite for *teaching* it; and of his eloquence or amenity as a lecturer, no cognisance has ever yet been taken.

—Cui lecta potenter erit res,
Nec facundia deseret hunc, nec lucidus
ordo.

If, however, any additional proof of qualification be required, let that proof be sought in a fair examination, and not in a local habitation or a name.

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Foreign Medicine.

Indigo in Spasmodic Diseases.

INDIGO given in graduated doses, at first a scruple three times a day, and subsequently

half an ounce, in ten cases of epilepsy produced no result whatever, except colouring the urine and motions. In four cases of hysteria the following phenomena were observed; after the administration of two drachms of indigo, a violent renal colic came on; the urine was of a very deep blue colour, and deposited a considerable quantity of very finely powdered indigo. The colic lasted four days, and only yielded to the continued use of oily emulsion. In only one case, after the usual colic had ceased, the nervous symptoms were suspended, nor indeed have they returned at this period (three months after). In two cases remarkable effects on the womb were produced; an amenorrhœa which was concomitant with hysteria was relieved without any cessation of the latter. In two cases of chorea, the indigo had no effect. M. Strahl therefore concludes that this substance is of no benefit in nervous affections, but that it appears to have a decided action on the genito—urinary system.—*Journal des Chirurgie und Augen-Heilkunde*, vol. 22.

Obliteration of the Intestine at the Ileo-cæcal Valve; Sac from the Ileum, containing 92 leaden Shots, and 120 Plum-stones.

Lami, aged 32, entered the Hôtel Dieu on the 12th of January, 1833. He had been ill for a month, and complained of pains in the belly; he had constant nausea and frequent vomiting; by the rectum, he was only able to pass a small quantity of liquid matter, and that after considerable efforts.

The pulse is natural, as is also the respiration; the tongue is healthy, the epigastrium free from pain; there is a dull sound in the centre of the abdomen; the stools are liquid and yellow. These symptoms, added to the emaciation, originated a belief in the existence of an affection of the mesenteric glands and vessels. The patient remained in this condition a fortnight; the vomiting ceased, but the state of the abdomen and of the stools were the same.

He left the hospital on the 2nd of February, and in three days again entered. There was then observed in the right iliac region, and approaching the umbilicus, a middle-sized, unequal tumour, which moved under the hand. This circumstance rather tended to confirm the former diagnosis, and no doubt was now entertained of the existence of a tuberculous affection of the mesenteric glands. (Iodurated ointment was rubbed upon the abdomen, iodine given internally, and emollient clysters administered). On the 10th of February, the tumour was treble the size it had been the night before; was hard but less mobile than before; handling caused pain in it. The difficulty of passing a stool was extreme. The 15th, sensibility over the whole abdomen is very great; the hand applied over the tumour is insupportable; there is vomiting, small and rapid

pulse, contracted features; the patient is in a state of utter fear and anxiety, and raves about shots and death; he might have been considered delirious, but in other respects he gave every evidence of sound intellect. The following morning the peritonitis had acquired a high degree of intensity; the patient had not a moment of quietude. He died in the course of the day.

Dissection 26 hours after death. From 15 to 18 ounces of a reddish fluid are in the peritoneal sac; recently formed false membranes, and all the usual marks of peritoneal inflammation. The small intestine is enormously dilated, whilst the colon and rectum are diminished. At the junction of the ilium with the cecum, a sac as large as the head of a foetus is found thrown towards the umbilicus, and covered with the mass of the small intestines. Adhesions, some old, others recent, keep it fixed to the posterior surface of the abdomen, the mesentery, and some intestinal folds. The parietes of this sac are thick and of a brown colour; on opening it, 120 plum-stones and 92 shots are seen. The stones are black, and as it were macerated in the liquid matters, in which they float; in other respects they are unchanged, and contain each a fresh kernel. The shots, of size No. 2, are also blackened, and were here and there depressed. There are also some cherry stones. The sac in which they are contained is continuous with the ilium, and seemed to be formed at the expense of the latter. The ileo-cæcal valve, which corresponded to the right and lower portion of the sac, was almost entirely obliterated, and only exhibited a very small perforation through which liquid matters alone could pass. The mesenteric glands were perfectly healthy, and none of the other organs had any morbid appearances.—*Gazette Medicale, February 28, 1835.*

[The *Gazette Medicale* very properly remarks that the above case is exceedingly interesting, from the fact of a diagnosis so wide of the mark having been given. The commemorative circumstances are very deficient; but it may be naturally presumed that the primary affection was an obliteration of the intestinal canal, which, as it caused immense difficulty in passing stools, may have given the patient the idea of swallowing, first plum-stones, and subsequently shots, in order to overcome the obstacle of the passage of faecal matters].

Carbonic Acid Fumigations in painful Amenorrhœa.

M. Majon, acting under the theory that carbonic acid, far from being a stimulant, is an antiphlogistic, proposes to employ it in the amenorrhœa accompanied with acute pains of the loins and uterus. The fumigations are applied by means of a gum-elastic tube, the free end of which is introduced into the vagina; carbonic acid is disengaged from

carbonate of lime, by diluted muriatic acid at the other extremity of, and passes along the tube. The fumigation should be repeated twice a day during the time immediately preceding the menstrual period. By it not only the course of the menses is regulated, but the pains also which precede succeed, and accompany them, are prevented.

Fumigations with carbonic acid may also be used in cystitis, ophthalmia and other local inflammations. M. Majon is of opinion that it both acts by diminishing the plasticity of the blood, and by relaxing and narcotising the animal fibre.

The gas may be carried about in caoutchouc bottles, to which tubes of any size may be affixed, and the fumigation made as in the former instance.—*Gazette des Hôpitaux, Feb. 26, 1835.*

Effect of the Employment of Gelatine as Food, in the Development and Maintenance of Muscular Power.

In a former memoir, M. Edwards, in conjunction with M. Balzac, examined the influence of gelatinous aliment on the weight of the body, the experiments to this end having been made on animals that could be treated in any rough manner. But in order to apply the results to many, the species chosen was one whose digestive functions were nearly allied with our own.

In ascertaining the effects of gelatine, it was employed in two different states, first, in a state of purity, and consequently mawkish and insipid, and again, somewhat dressed (*aromatisee*). In the former case it was proved, both by the effects on the weight of the body and by the continued existence of the animals subjected to its use, that gelatine in a state of purity was nutritious in a degree, but is not sufficient of itself to preserve life; as indeed is the case with other alimentary substances, and even bread.

The experiments of the same gentleman also went to shew that a continuation of bread and gelatine was also insufficient for the preservation of life, though the exhaustion of the latter was somewhat more gradual than when either material was employed alone.

As regards dressed gelatine, that is, dressed with the sapid and odorous part of meat, M. M. Edwards' and Balzac's experiments shew that this substance thus modified, possesses highly nutritious qualities, so much so that such an addition afforded all the dietetic qualities essential to the preservation of the weight and even to the growth of the body.

In the experiments made on dogs, they ascertained, to a certain degree, the greater or less activity and strength dependent on the variations of diet; but an exact calculation could not be made. In the experiments on men, the sensation of exhaustion or power could only be approached in

measurement, and it was therefore necessary to have recourse to some mechanical means, to ascertain exactly the variations of strength; but it was more particularly necessary to observe whether, independently of diet, there were not causes tending to produce variations of strength, and should such be discovered, to learn whether these variations could be subjected to some regular law.

By means of a dynamometer, M. Edwards measured the strength of one individual at five different periods of the day; at 7 o'clock in the morning; 11 in the morning; one o'clock; 7 in the evening and 11 in the evening. These experiments, repeated during 10 successive days, and in similar circumstances, gave the following average figures of the strength of the hand:

7 in the morning	67,7
11	72,1
1	73
7 in the evening	71,2
11	67,6.

Thus, from the time of rising at seven in the morning up to one o'clock, the strength was on the increase, after which it gradually decreased; it was lowest at the two ends of the day. What was the reason of this? Does the aliment taken an hour after rising in the morning, lay the foundation of the increasing powers? or is such a process merely dependant on a natural law? To settle this, the hour of meal-eating was changed; breakfast, which had hitherto been taken at eight o'clock was deferred to half past ten. The dynamometer was then used at seven, half-past nine, and ten o'clock; the average of the three periods shewed that in the interval, and without taking any nourishment, or the intervention of any appreciable exciting cause, the strength had progressively increased. Therefore, it is plain that when fasting, a progressive increase of muscular power occurs during the major part of the morning, without any other excitation than the natural play of the organs, and the mild action of external agents. Further experiments, however, shewed that after breakfast the dynamometer was raised 7°, evidencing that though the increase of power is independant of, it is still aided by the ingestion of aliment.

[Many experiments made by M. Edwards on the privates of a regiment, are related in this portion of his memoir; we shall, however, content ourselves with the conclusions he draws from them regarding the influence of aliment on the muscular powers: they are as follows.]

It may therefore be established as a general rule, that there is an augmentation of muscular power in some men after every meal that is composed of good materials: and there is every reason to suspect that the exceptions observed were owing to the fact of some of the subjects of the experiments not being sound men (*hommes forts*). To

verify the point, similar experiments were made on persons that were unsound either from disease or from age, and the results were the converse to those remarked in the soldiers. In individuals therefore who, in proportion to their age, are relatively debilitated, and have still a nominal constitution, there is a general decrease of muscular power immediately after eating; but this descending tendency is far less pronounced than the contrary tendency, which is found under similar circumstances.

This contact between the immediate effects of food on the muscular powers, according to the soundness or debility of individuals, is worthy of attention. The elevation or depression of the powers which follows the ingestion of aliments is, as it were, instantaneous; it is the consequence of a passing contact, and altogether distinct from the subsequent effects of digested food. This operation commencing immediately after the arrival of food in the stomach, tends to concentrate there the powers of the individuals, and consequently to counterbalance the other effect. Two opposite tendencies therefore obtain after the ingestion of aliments, and it is the difference between them that the dynamometer makes known; this difference is minus in feeble and plus in vigorous persons. If the quantity of aliment is moderate, the call of the powers towards the stomach will be less, whilst the excitation produced by the contact will be the same as if the meal had been larger. We may then imagine cases wherein, after taking soup, the development of the muscular powers shall be greater than at the end of the meal. This excitement is also greater after dressed than after simple gelatine.

* * * * *

It may therefore be laid down as a general proposition, that the intensity of the action of gelatine on the muscular powers tends to increase with the proportion of this substance; whence it would follow, that soup made with two ounces of gelatine and a pound of meat would act more energetically on the muscular powers than common soup made from four pounds of meat. The strengthening influence of gelatine by itself, has been confirmed by another result, namely, that the fortifying action of soup with the maximum of gelatine, has not only greater intensity but also lasts for a longer period; for it must not be supposed that the terms, intensity and duration, are always connected.

—*Gazette Medicale*, Feb. 21, 1835.

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Hospital Reports.

ST. GEORGE'S HOSPITAL.

Cancer of the Penis—Amputation.

MARCH 10TH.—A healthy-looking man, apparently of about forty years of age, was

brought into the operating theatre, having laboured under cancer of the penis for seven months. The disease commenced, as generally is the case, in the shape of a purplish livid tubercle, situate on the glans penis, which had rapidly involved the whole of that structure, and extended to the prepuce, which latter thickened, everted, and retracted, tightly embraced the cervix of the glans, thus producing, as the operator afterwards remarked, a troublesome form of paraphimosis, which was very general in these cases.

The open carcinomatous ulcer had quickly succeeded to the first stage and spread over the whole diseased surface.

The operation of amputation having been decided upon by the surgical staff of the hospital, the case afforded Mr. Cutler, the recently elected assistant-surgeon, an opportunity of making his first appearance before the pupils of the hospital in the character of an operator, and we can hardly refrain from taking this opportunity of saying that the intrepid and surgeon-like manner in which the operation was gone through reflected the highest credit upon the operator; and without any desire to make the least invidious comparison between Mr. Cutler and his opponents at the late election, we must say that we think the governors of the institution have every reason for gratulation in possessing the services of this gentleman.

A fillet of broad tape being first passed once or twice around the root of the penis, in order to prevent unnecessary hæmorrhage, its ends were held by Mr. Hawkins, whilst Mr. Cutler, taking the glans penis in his left hand, and slightly extending the organ, divided it with one stroke of the knife about an inch and a half from the pubes. Upon slightly relaxing the fillet, the mouths of the vessels in the stump were readily discovered, and ligatures at once applied to them, about six in all being requisite. A catheter of elastic gum was introduced through the urethra into the bladder, its extremity being cut off about an inch from the opening; the skin was then drawn over the stump and secured by two stitches of suture. The catheter was secured in the bladder by means of the ordinary apparatus of fillets and tapes employed for that purpose, and its mouth closed with a wooden peg. We have seldom witnessed a catheter secured in the bladder in a more dexterous and neat manner.

After the patient had been removed to the ward, Mr. Cutler gave a short account of the history and progress of the case. A section of the amputated portion of the penis having been made, it was found to present the usual characteristics of scirrhus in an ulcerated state, involving the whole of the glans and prepuce, but not extending far beyond these parts, though, to our eye, the fibrous tunics of the cavernous bodies appeared somewhat hypertrophied even at the point of division.

It is to be hoped that the disease will not return in the stump; but we understand that Sir B. Brodie, who has operated in about twenty cases, says that he only recollects two in which this unhappy result did not occur.

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WESTMINSTER HOSPITAL.

Stricture of the Urethra.

EDWARD CORMACK, aged 38, was admitted into Northumberland Ward, March 2nd, under the care of Mr. White. He appears to have led an irregular and dissipated life, and had stricture of the urethra seven years ago, which, however, had been so far successfully treated as to permit a free passage to a small stream of urine, except when he was under the influence of a debauch. He admits that he has been drinking to excess, more or less, throughout last week, but that on Saturday he made himself completely drunk with spirits and beer. On the Sunday morning he found that he could not pass his water, unless in drops, and by Monday morning the retention had become complete. He applied to a neighbouring apothecary, who endeavoured to pass a bougie, but without effect. He came to the hospital about noon, and Mr. Thompson endeavoured to pass, first a small silver catheter, and afterwards instruments of catgut and elastic gum, but without success. A warm bath was now ordered, and the patient placed in it, and the instrument then tried, and the bath was thrice repeated, but with the like result. Venesection was now had recourse to, and twelve ounces of blood were drawn from the arm; and after an interval had elapsed, the attempt to pass the catheter was also repeated, but even in the state of relaxation and exhaustion in this way produced, no instrument could be passed. The endeavours of Mr. White, who came about midnight, were attended with no greater success; it appeared that there was a false passage in the muscular portion of the canal, which added greatly to the difficulty in attempting to introduce the instrument. Mr. White and Mr. Thompson consulted as to the propriety of puncturing the bladder from the rectum; it was, however, agreed to wait until the morning; a suppository, of four grains of solid opium having been directed to be administered.

3rd. The patient is somewhat relieved this morning, having passed a little urine gutta-tim. The tumefaction and tension in the hypogastric region, which existed yesterday, is not however in the least diminished, and appears to be still more sensible to pressure. The blood taken away at the first venesection yesterday does not present any appearance of the buffy coat, but that of the second is highly buffed and cupped. He was ordered an enema containing 2 drachms of liquor opii sedativus, 2 ounces of castor oil, and a

pint of gruel, which has been administered, and has afforded him additional relief, but no instrument can yet be introduced. He is ordered to take at bed-time 15 grs. of Dover's Powder.

4th. He has been somewhat relieved by passing about a pint of very high-coloured urine, in drops. He is able, by actively assisting in its expulsion, to pass a little in a very small stream, but this occasions him excessive pain. His mouth is sore, and breath very offensive; it now turning out that he is under the influence of mercury, having both been rubbing it in and taking it internally before his admission, for a chancre.

There is a very considerable degree of swelling above the pubes, which is very tender on pressure. The tongue is covered with a thick creamy fur; pulse 96, full and soft. He had some castor oil yesterday, which has freely relaxed his bowels. He is ordered a suppository of 5 grs. of opium at bed time.

5th. He continued to pass water guttatim until about 2 p. m., when he had a severe attack of pain, and found himself unable to expel a drop.

Mr. Snowdon, the house-surgeon, being called to him, procured a warm bath, which gave him great relief, and enabled him to pass a little water.

The retention, however, has returned in its most unmitigated form during the day, and the hypogastric tumour evidently increases in size. The general health, however, is not so much affected as might have been expected; nor is the countenance expressive of any great degree of anxiety; the pulse is 84, and not so full. The smallest elastic gum catheter that could be procured was endeavoured to be passed, both by Mr. Thompson and Mr. Guthrie, but without success; it was therefore passed into the urethra as far as practicable, which was just beyond the triangular ligament, and was left there, being secured to the penis with threads and adhesive plaister.

6th. This morning, between the hours of six and seven, he has passed, guttatim, about a quart of very high-coloured urine, but since that period he has not been able to pass a single drop. The tumour in the hypogastric region has much increased in size; it extends to the umbilicus, and is well defined. Mr. Thompson again endeavoured to pass the instrument, but ineffectually; he therefore determined to try the effect of a tobacco-enema, which was ordered to be prepared. The countenance of the patient has a more anxious expression, and altogether he is not so well.

7th. He has been somewhat relieved since yesterday, by passing about three pints of urine in frequently repeated drops, but he cannot pass any in a stream. The tumour in the hypogastrium is, however, much the same as before. The tobacco-enema reduced the muscular power considerably; and, al-

though it did not enable Mr. Thompson to pass any instrument, yet he thinks it was useful, and that it enabled the patient to pass more water than he otherwise would have done. Mr. Guthrie considers that this case confirms an opinion for which he has contended; viz. that the peculiar manner in which the ureters enter the bladder is a provision of nature, against excessive distention of that viscus, a moderate degree of distention producing a mechanical closure of the openings of these canals, and thus preventing the further admission of urine, which hence accumulates in the ureters and pelves of the kidneys, which become proportionally dilated, and afford temporary reservoirs until the obstruction in the urethra is removed, and the fluid can find its way into the bladder*.

9th. Much better. He discharges the urine very freely, and without much effort, as it even drops from him when asleep. However, he passes it only in drops, though these quickly succeed each other. There is now but very slight tenderness over the pubes; the pulse 80, and regular. Altogether he now appears to be going on well.

11th. He is now able to pass his water in a stream, though a small and interrupted one; he has but little pain, and passes about three pints daily. His general health is pretty good, though but weak.

14th. Much improved since last report; the vesical tumour has altogether disappeared, and the urine continues to pass with the same and even a greater degree of freedom.

16th. Continues improving; but no instrument has yet been passed, nor has it been attempted during the last four days.

Diseased growth of the Clitoris and Nympha.

Previous to a leg being removed by Mr. Thompson, a female was brought into the theatre, to have an enlarged and diseased nympha removed by Mr. White. It appears that the disease is of long standing, and that a great portion of the clitoris and the nympha of the opposite side had been removed at a previous operation some time since. Upon the parts being exposed, the labia majora were found to be greatly tumefied, as if from an œdematous condition of this tissue, and the skin of the perineum extending beyond the anus and to the inner part of the thighs, was of a highly livid colour, and in some parts apparently disposed to ulcerate. Within the labium of the left side, and occupying the whole of the genital fissure, was seen a large oval tumour, about the size of a hen's egg; its surface was intersected by numerous lineal depressions of its tegument, which was of a dirty flesh colour. Its general appearance was hence similar to that of one of those condylomatous tumours, resembled

* Vide Guthrie on the Anatomy and Diseases of the Bladder and Urethra. London, 1834, pp. 6—8.

risen to 100 ; bowels open. He was bled again to $\frac{3}{4}$ xvj, and 15 leeches were applied to his face ; five grains of calomel were given at night, and the senna mixture the next morning, when his pulse had fallen to 96 ; the redness now began to leave the face and spread itself over the scalp, and he became slightly delirious ; this was an unfavourable symptom—it is true that many persons who are delirious recover, yet, generally the cases are fatal. So long as the intellects are clear, though the inflammation be very severe, your prognosis may be favourable ; when the inflammation spreads, and delirium come on, it is unfavourable. The head was shaved and fomented, and the swollen parts of the eyelids again punctured. Tartarized antimony in $\frac{1}{4}$ gr. gradually increased to $\frac{1}{2}$ gr. doses, were given every two or three hours.

12th. More delirium ; pulse 120 ; erysipelas of the face nearly gone ; discontinue the tartarized antimony, and as there is great debility, give him a mixture containing the carbonate of ammonia.

13th. Delirious all night.

Muriat. morphiae. gr. i, statim.

The erysipelas extending to the back, we drew a line across with nitrate of silver, in order to stop its progress ; it was not, however, attended with any benefit. Mr. Chandler, the house-surgeon, thought this arose from the line being too near the diseased parts ; nitrate of silver is often efficacious in stopping the extension of the disease.

15th. There is great difficulty of breathing, with inflammation of the fauces and uvula, the mucous membrane of which shews a slight vesication containing a serous fluid. It is possible the inflammation might have extended from the face to the throat ; Baron Duputyren mentions several cases in which this occurred, so that those who maintain that erysipelas only affects cellular membrane are mistaken. John Hunter did not think it confined to the skin, but looked on every species of inflammation which tended to spread, as erysipelatous. Ordered to inhale the steam of hot water. At half-past eleven, P.M. the breathing became more difficult, and he died suddenly, apparently from suffocation.

Dr. Carswell is preparing the parts of the throat affected, or I should have had them here for your inspection. Mr. Liston however, who has seen several cases of the kind, had this drawing taken (shewing it), of the state of parts in a case semilar to the present one, only more advanced. You will perceive in this drawing, that there is pus under the mucous membrane of the glottis ; ours only had a serous effusion in the same situation, but a small quantity of pus ; in the cellular tissue outwardly to the thyroid cartilage, also considerable inflammation of the mucous membrane of the trachea. On opening the head, the vessels of the brain were found full of black blood, but no other symptoms of disease was present. The left ventricle of the heart was distended with black blood, shewing the immediate cause of death was suffocation. The most important circumstance of the case is the disposition to inflammation of internal parts, that exists in erysipelas : after death you will find inflammation in some of the deep-seated organs, as in our case, though the erysipelas be apparently cured. Had we been aware in the early stage that disease had existed in the throat, we should have left the erysipelas to itself—and I do not think we should have given stimulants. Had tracheotomy been performed it might have saved the patient for a few hours, but would not have been attended with any ultimate benefit.

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CORRESPONDENTS.

An *Obstetrician* will find the infomation in M. Ballière's Catalogue.

An *Inquirer*.—The silly rumour is absurd, as will appear by our Advertisement sheet.

Mr. M.—The article is under consideration—Advertisers would not consent to a monthly appearance.

A *Southampton Friend, Medicus, A General Practitioner*, and others.—Dr. Ryan will re-print the New Formulary of Hospitals in a pocket volume. It is now in the press, and will include all the new medicines described by M. Magendie in his edition of this year, and proposed by others, to the time of publication.

WEEKLY METEOROLOGICAL JOURNAL.

1835.	Moon.	Thermom.			Barometer.		De Luc's Hygrometer		Winds,		Atmospheric Variations.		
Mar.													
19	☉	36	45	36	30.00	30.02	57	58	N.	N.	Foggy	Foggy	Fine
20		44	52	44	30.06	30.06	58	57	W.S.W.	S.W.	Fine	Fine	Cloudy
21		48	51	45	30.01	29.98	58	60	S.W.	N.	Rain	Rain	—
22		47	48	39	30.00	29.99	60	59	N.N.E.	N.E.	Cloudy	—	Rain
23		43	48	39	30.01	30.01	59	59	N.	N.N.E.	Fine	Fine	Fine
24		41	46	34	30.05	30.16	59	55	N.N.E.	N.E.	Cloudy	—	—
25		38	49	36	30.26	30.31	55	57	N.N.E.	N	Fine	—	—

THE

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SATURDAY, APRIL 4, 1835.

VOL. VII.

LECTURES
ON
MEDICAL JURISPRUDENCE,
DELIVERED BY PROFESSOR A. T. THOMSON,
F. L. S.,
At the University of London; Session 1834-35.
LECTURE XXIII.

GENTLEMEN—The next subject, *Public Health*, to which I have to direct your attention, is one of general interest, and, were it fully entered into, would itself be sufficient for a separate course of lectures. The nature of this course does not permit me to bestow upon it the time and consideration which it merits; but, nevertheless, it cannot be passed over in silence.

The object of every government is the happiness and welfare of the people; and, consequently, the maintenance of the health of the community may be justly regarded as one of the functions of a government. In many states there is a separate code or system of laws for this purpose; but, in this country, except on some particular emergency—such as, for instance, when the Asiatic Cholera visited our shores, and in the enforcement of the quarantine laws, our government scarcely concerns itself with the health of the people. The individual interests of Englishmen, however, have effected what the government has neglected; and our cities and towns are as healthy, if not more so, than many of those cities in which every thing connected with their salubrity is a matter of legal enactment. Our towns are amply supplied with pure water; the streets are cleaned, and drainage is attended to; and, following the example of some of our continental neighbours, we are, at length, about to remove the places for the interment of the dead from the midst of the population to cemeteries at a distance from the towns. That the exhalations emitted from churchyards are, to a certain degree, injurious to the health of those in their vicinity has been demonstrated by ample experience, particularly if the district be a populous one and the opening of the graves frequent. But even the improvements which are anticipated on this subject, are not the work of govern-

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ment, but have originated as matter of speculation with individuals: indeed, as I have already said, with the exception of the quarantine regulations, and the Central Board of Health lately established, England may be regarded as devoid of *medical police*.

The defect of medical police, however, is in some degree supplied by the laws against nuisances, and as far as these are connected with health, they become subjects of medico-legal inquiry; and much depends on the evidence afforded by the physician, in finding a verdict in such cases. Whatever inconveniences, hurts, or damages, is a nuisance in the eye of the law: they may therefore, be regarded as affecting both animate and inanimate. The latter only comes within the sphere of the medical practitioner; the former is intimately connected with his professional duties. Any person who fixes his abode near a very obvious nuisance must abide the consequences, and cannot be legally indemnified for any inconvenience or injury which he may sustain; but if the nuisance be one which is not very obvious to the senses, and yet injurious to health, no speculator has a right for his own benefit to establish any manufacture in a neighbourhood, which may endanger either the property or the person of his neighbours; and, therefore, those aggrieved have a right to compensation at law: but, at the same time, in a country like ours, the prosperity of which depends on enterprize and commercial advantages, these must not be checked by capricious or arbitrary objections. In cases, therefore, in which the health or personal comfort of individuals is supposed to suffer, medical evidence is called in to determine the extent and nature of the injury sustained. The necessity, therefore, for the medical practitioner to make himself fully acquainted with the influence of every cause of disease, arising from what the law terms nuisances, is sufficiently obvious. My learned colleague, however, will inform you that there are exceptions depending on custom, and that the law does not consider many real nuisances actionable, even in the most populous districts, provided they have existed before any buildings were erected near them. But

even in such cases medical opinions may be required; and our business is not to determine on the propriety of the law, but on the degree of insalubrity of the nuisance.

Nuisances may be arranged under four heads:—

1. Manufactories or trades which produce noxious effluvia, insufferable either from the noisomeness of their odours, or which are the source of diseases.

2. Shambles, or slaughter-houses.

3. Drains and outlets of waste liquids which may poison neighbouring streams.

4. Infections.

The first set of nuisances, those connected with trades and manufactories, may be subdivided into—1. such as afford hurtful effluvia, the result of putrefaction, as animal decomposition by heat: 2. such as evolve much smoke, and carbonaceous matters: and 3. such as diffuse gases, which, mingling with the atmosphere, become injurious to health when inhaled into the lungs.

Almost all vegetable and animal substances, placed under some circumstances, when deprived of vitality, supplied with moisture, and exposed to air and a certain temperature, undergo the putrefactive fermentation, the products of which, injurious to health, are carburetted and sulphuretted hydrogen, carbonic acid, and nitrogen. The two first operate upon the living system as sedative poisons; the two latter cause asphyxia; and there are numerous instances on the records of medicine, of diseases produced by these effluvia operating upon the body. All occupations, therefore, which give rise to such effluvia are truly nuisances, and should be performed without the limits of cities, and at a distance from human dwellings.

The preparation of hemp and flax affords a nuisance of this description. In order to free the vegetable fibre from the other parts of the stems of the plants, in making hemp and flax, the plants are placed in pools or fosses dug for the purpose, until such time as putrefaction is produced and proceeds to a certain point; the odour of the effluvia which exhales is most noisome, closely resembling that of bilge water in the hold of a foul ship. Even when this process is conducted in the country, at a distance from houses, diseases sometimes occur from it, such as fevers of a remittent and intermittent character. At Helmsedt, the flax is steeped in the Aller, and, annually, produces an epidemic dysentery which prevails for several weeks during the autumn. Lancisi ascribes some of the fevers which rage at Constantinople to the fermentation of the moist hemp brought from Cairo and stored in granaries during the summer months; and instances are on record of malignant fevers originating from this source. Some parts of the process of tanning is equally deleterious, especially that part which subjects the hides to incipient putrefaction, in order

to loosen the epidermis and enable it and the hair to be more readily separated from the true skin, which is to be converted into leather. The making of catgut, purifying fish oil, butcher's stalls, cabbages and other vegetables left in markets to putrify, and accumulations of filth behind houses, are all properly legal nuisances, and in prosecutions regarding them the decisions rest chiefly on medical evidence. Some trades necessarily produce effluvia of the most offensive kind: such as varnish-making, the unfolding of horns by means of heat, soap-boiling, and such like, which are almost as injurious to health as putrefaction, and, therefore, are deservedly regarded as nuisances. In varnish-making, in particular, the stench is sometimes so great, that the workmen have fainted: and on one occasion two men actually lost their lives in a manufactory of varnish in Gray's-inn-lane. But some employments are productive of offensive odours, such, for example, as rendering tallow, that is converting fat into tallow, and making candles, which on many nervous and irritable habits cause nausea and headache, and are regarded as nuisances in the eye of the law: nevertheless, they cannot be said to be actually injurious to health. In actions, therefore, brought in such cases, if it be necessary to procure medical evidence on either side, it behoves you to draw the distinction between a state of full health and one of delicacy or actual disease, in delivering your opinions respecting the influence of offensive odours on the health of the community.

All manufactories and trades which require the consumption of much coal, and emit large volumes of smoke, are also injurious to health, but certainly in a less degree than those in which putrefaction takes place; and if we consider the comparative healthy state of this metropolis, with that of other cities of a much less extent, and then take into account the immense quantity of carbonaceous matter constantly floating in the atmosphere, we cannot regard smoke as a source of general unhealthiness. It has been demonstrated that the quantity of smoke thrown into the atmosphere from fires of equal size and consumption of coals, is in the inverse ratio of the height of the chimneys. When these are very high, much of the carbonaceous and other matters, which would otherwise escape into the atmosphere, are condensed in the chimney; thence in delivering opinions respecting the unwholesomeness of breweries, distilleries, glass-houses, and other erections, giving off much smoke, the elevation of the chimney must always be inquired into, and the inference drawn accordingly, on the principles which have been just mentioned. The same reasoning applies, also, to some manufactories in which large quantities of foetid vapours are evolved; as, for instance, in the manufacture of Prussian blue. In this process,

the distillation of animal matter with impure potassa extricates most offensive vapours, which are, nevertheless, not injurious to health. Such works, however, are justly regarded as nuisances: but if the chimnies be carried to a height of 150 or 200 feet, no inconvenience arises, as the offensive vapours are dissipated in the air.

Gases are more deleterious, even when largely diluted, than smoke, and therefore, in a medico-legal point of view, those manufactories which give them off are greater nuisances than those which are regarded as such, only on account of the great quantity of smoke which they create. The manufactory of sulphuric acid, in this country, is of this description, owing to the careless manner in which much of the materials is allowed to escape into the air, in the form of sulphurous acid and nitrous acid gas. Much inconvenience and injury to health arises from breathing these gases; but an action against the erection of a work of this kind may be vexatious; and, if the effects have not already been felt, and the evidence of a medical man is brought forward to prove the insalubrity of such a work, you must bear in recollection that it is only insalubrious from want of due precaution; and that works of this description may be carried on in the midst of a populous town, or a city, without the least injury to the health of the population. This gas, however, may prove injurious to a neighbourhood when extricated abundantly in cementing iron-work, which is sometimes done by a compound of muriate of ammonia, sulphur, and iron-filings. A case of this kind occurred in 1821, at Maidstone. A workman was repairing the inside of a boiler of a steam-engine with this cement, and was suffocated; his assistant, in descending to his aid, inhaled the fumes and also fell to the bottom. Water was thrown into the boiler to absorb the gas, and the bodies taken out; one of the men was quite dead, and the other died next morning. With respect to nitrous gas, issuing from the works for making aquafortis, nothing insalubrious attaches to it; on the contrary, in the highly diluted state in which it is found in the atmosphere, it may be breathed not only with impunity, but with advantage: and the same observation applies, even in a greater degree, to manufactories of bleaching fluid, in which much chlorine is extricated, and escapes into the surrounding atmosphere. At the same time it must be recollected, that strangers going into such works may suffer, and that fatal effects have occurred to the workmen in them, from accidents extricating such quantities of the gases as to affect powerfully the mucous membrane of the trachea. Under such circumstances, therefore, these gases cannot be regarded as innocuous. In Curvisart's *Journal of Medicine*, a case is detailed by Dr. Desgranges, which is copied into the 3rd. vol. of the

Edinb. Med. and Surgical Journal, p. 16.—(Read). In the same manner chlorine may prove fatal; but in the degree of dilution in which they are usually found within the manufactories, even they may be breathed with impunity. Mr. Tennant, of Glasgow, the greatest manufacturer of bleaching materials in this country, informed me that men who go to engage themselves to him, labouring under pulmonary diseases, lose their coughs if they be taken gradually into what is called the chlorine house; and that people labouring under consumption of the lungs frequently take lodgings in the neighbourhood of his works, for the express purpose of inhaling the highly diluted gas.

In coal gas works, much of the mixed gases occasionally escape, and are extremely offensive; but, although I am of opinion that this mixed gas operates as an injurious agent, when inhaled by those not accustomed to it, yet farther experience is required to prove this opinion. It must be admitted that gas-men breathe it in a much less diluted state with impunity; but it is not easy to limit the extent to which the body will accommodate itself to the most deleterious influences, when gradually subjected to them. Sanctorius relates a curious case of a criminal who fell sick when taken out of a noisome dungeon, in which he had been long confined, and could not be recovered until he was restored to the impure air in which he had long breathed.

Brick and lime-kilns exhale carburetted hydrogen gas, and carbonic acid gas, and consequently prove injurious to persons who fall asleep on them; but they cannot be regarded as nuisances if the insalubrity of these gases, in the greatly diluted state in which they are spread over neighbourhoods; but as a nuisance in the eye of the law comprehends "anything which worketh hurt, inconvenience, or damage," they may be prosecuted as such; but, in giving evidence as to their unwholesomeness, you must keep in view the facts which I have just mentioned.

The second set of nuisances, legally considered as such—shambles and slaughter-houses—are undoubtedly the sources of diseases and mortality when the offals are not regularly removed; for when the filth is collected in heaps and left to putrefy, the same effects result as in the first set of nuisances to which I directed your attention. Fevers, and even those of an epidemic kind, are engendered. Orfila applied putrid animal matters to wounds in dogs and other quadrupeds, and found that death generally ensued in less than twenty-four hours: extensive local inflammation and constitutional fever were induced. There is an Act of the 57 George III. expressly enacting a penalty for slaughtering animals in or near any street; but this still takes place behind the houses of private butchers; nevertheless, by regularly removing the

offal, no inconvenience is felt in the neighbourhood. The trade of a butcher, when cleanliness is attended to, is rather healthy, at least few people appear to possess more vigour of frame, and even in large towns seem to enjoy greater health than the servants and apprentices of butchers, who are constantly surrounded with fresh carcasses. Thus I have never seen a butcher suffering from phthisis; nor have I ever met with a medical man who has witnessed the disease amongst this description of people. I cannot pretend to account for this circumstance; but the fact is undeniable.

With respect to the third description of nuisances—foul drains and cesspools—there can be only one opinion. These operate in two ways; by the exhalations arising from them infesting the atmosphere with the miasma of disease; and by carrying poisonous matters in a fluid state into wholesome streams. When a drain is obstructed, from much filth accumulating in it, it becomes a source of miasms the same as arise from stagnant pools, but more destructive, owing to the greater quantity of animal matter contained in the mud. The exhalations are chiefly those of ammonia, sulphuretted hydrogen gas, and carburetted hydrogen gas. When these mixed gases are inhaled, the effect is sudden weakness and insensibility, and all the symptoms of asphyxia, terminating in immediate death; but when these gases are more diluted with atmospherical air, the effects are nausea, colic, imperfectly defined pains in the chest, and lethargy. Many instances of fatal cases from such exhalations are detailed in a work by M. Hallé, entitled, "*Recherches sur la Nature du Mephitisme des fosses d'aisance*, 1785." Analogous accidents have arisen in this country from clearing out drains; and it is of importance in all such cases to ascertain the presence of sulphuretted hydrogen, before a workman ventures into a foul drain, by carrying or rather letting down into it a piece of paper moistened with a solution of subacetate of lead, or even merely rubbed over with the dry carbonate. If the gas be present, the paper will be stained of a deep brown. Dupuytren ascertained that air containing 1-1300th of this gas will destroy a bird in a short time; that which contains 1-800th produces death in a middle-sized dog; and a horse dies in an atmosphere containing 1-250th of it. In 1828, twenty-one boys at a boarding school at Clapham were suddenly seized with alarming symptoms of violent irritation in the stomach and bowels, subsultus in the muscles of the arms, and excessive prostration of strength. This was attributed to a drain exhaling sulphuretted hydrogen gas, and it is probable that this was the true source of the disease. During the prevalence of typhus in Paris, in 1814, M. Iadioux remarked that the mortality in the Hospital Salpêtrière was greatest in those wards near the sewers.

When streams or springs are contaminated with the water of drains, the injurious effect upon the water can always be determined by its influence on the fish contained in the stream: if they die, the water is certainly unfit for the use of man; but much filth may flow into a river or stream, and render the water disgusting, without so far contaminating it as to injure health. This is the case in the Thames, into which all the drains in this vast metropolis empty themselves, yet the water, when filtered, is as wholesome as any obtained from the purest springs. This depends on the vast body of water, and the constant change which it is undergoing, so that the poisonous contents of the drains are rendered inert by dilution, in the same manner as the poisonous exhalations emanating from some manufactories are dissipated in the atmosphere by means of high chimnies. But the same reasoning does not hold with regard to tanks and stagnant water, or wells into which imperfect drains may pour their contents by filtration, and render the water not only merely insalubrious, but poisonous. Such limited collections of water may also be actually poisoned by vegetable poisons thrown into them—a circumstance not uncommon in Oriental countries, and one which would have proved fatal to a large detachment of the British army in the Burmese war, had it not been prevented by the knowledge and activity of Dr. Wallich. In one tank of water destined for the use of the army, in a halt in pursuit of the retreating Burmese, the water had been poisoned by the *aconitum ferox*, bruised and thrown into the tank by the enemy, before they evacuated the place. Fish-ponds are sometimes poisoned, in this country, by the blue vetch, *ricia lathyroides*, a transportable offence by a statute of 7 & 8 Geo. IV.

Public hospitals for the cure of the sick and maimed poor are the proudest boast of Christianity, and the most distinguishing feature between the mild and benevolent faith of our Redeemer and the cruel rites of Paganism. They have, nevertheless, been frequently regarded as nuisances, and actions have been brought to put them down. Whatever may be the law upon this subject, and upon this point, my learned colleague will fully satisfy you, it is proper that you should be aware that even hospitals erected expressly for the reception of infectious fevers, are not likely to spread infection in a neighbourhood, if only ordinary attention be paid to cleanliness and ventilation. This fact was clearly demonstrated in the early period of the House of Recovery at Manchester, and it has since been confirmed at other places. Speaking of the House of Recovery at Manchester, Dr. Ferriar has recorded the following important observations in his *Medical Histories and Reflections*:—"During several years," says he, "we were limited in space, and unable to receive the whole num-

ber of patients whom it was expedient to receive. Some adjoining and neighbouring houses were therefore occasionally engaged in the same street, for the admission of patients; and thus, without any previous intention on our part, a set of experiments was made respecting the distance to which contagion will extend. In the first instance, no persons suffered in the neighbouring buildings, where the street was only four yards wide, the windows of the occasional fever-ward being generally open, and the house full of patients. In another instance, a house capable of containing twenty-five patients, not at all separated from the houses in the adjoining row, was used for twelve months as a fever ward, without the occurrence of fever in the immediate neighbourhood. Thus the *experimentum crucis*," continues Dr. Ferriar, "has been tried, and the innocence of contagion, when properly diluted with atmospheric air, is fully established." This is a most important fact, and ought never to be lost sight of in every instance where medical evidence is required on any question which may be raised respecting the insalubrious influence of an hospital on a neighbourhood. It is also necessary to remember, that the influence of pure air and ventilation in weakening the power of contagion, does not depend on its acting as a neutralizer or destroyer of the virus, but merely by diffusing it through an extensive space, it is so diluted as to be rendered harmless; for it is not the impure air of an ill ventilated hospital which adds to the greater contagiousness of its wards over those of a well ventilated hospital: it is the concentration of a great quantity of contagious matter within a small space, and the effect of that impure air on the habit, in predisposing it to be powerfully affected by the contagious matter. In every hospital the cases of infectious diseases should be separated from the others, and placed in wards by themselves, by which means the chance of the propagation of the infection is greatly lessened: it is, indeed, astonishing how small an interval is necessary to cut off the influence of a fever in an hospital or a ward, if free ventilation be attended to. In the Vienna hospital the fever ward is separated from that allotted to chronic diseases by a space of six feet only, yet such is the beneficial influence of ventilation, that Dr. Frank informs us there has been only one instance of an individual in the chronic ward being affected with fever; and on investigation it was discovered, that in this case it was occasioned by the sufferer having visited a friend in the fever ward. Keeping these circumstances in view, there can be no difficulty in deciding how far an hospital may be regarded as a nuisance, or injurious to the health of any neighbourhood. If it be clean, well ventilated, and the cases of an infectious nature are kept distinct from the others, no injury can possibly accrue to

the neighbourhood from such an hospital; it cannot be regarded as a nuisance; but if, on the contrary, it be ill ventilated, the virus may be so concentrated, that, like Pandora's box, when opened, it may be capable of infecting the whole vicinity: in this case it is one of the worst of nuisances.

In closing these brief remarks on hospitals, considered as nuisances, I cannot refrain from embracing the opportunity which is afforded me of referring to the origin of these admirable institutions for alleviating human misery. The first public hospital was erected in the fourth century by a noble Roman lady, by name Fabiola, a Christian by religion, who having regarded herself sinful for having married a second husband whilst her first, whom she divorced, lived, imposed upon herself a solemn penance, converted her estates into money, and built an infirmary, into which sick and distressed objects of every description were collected from the streets. "Many who were afflicted with distempers the most loathsome and offensive she attended in person, carried them in her arms, bathed their sores, moistened the lips of the dying with her own hands, and so tenderly assuaged their miseries, that those who were well almost envied the sick." (Edin. Med. and Surg. Journ., vol. 4, p. 245). This conduct was the result of superstition; but, as it has been well said, "we might pardon superstition itself, if it had never taken a different turn." It is uncertain whether, in the earliest hospitals, there were either physicians or surgeons attached to them. The knights of Jerusalem attended the sick, bound up their wounds, and acted as their physicians; but their art lay in exorcism and the administration of beverages, oil, wool, and cabbage leaves. "They trusted," says Guy de Chauliac, "que Dieu a mis sa vertu aux parolles, aux herbes, et aux pierres." The first mention of the appointment of physicians and surgeons to hospitals is in the statutes of the Knights Templars, under the government of John de Lustie, who, in 1437, as grand master, defined the duty of physician and surgeon in such establishments. In the twelfth century hospitals had so much increased that we are informed by Benjamin of Tudela, that he found many hospitals at Bagdad having nearly sixty shops or dispensaries attached to them, which distributed, at the public expense, the necessary medicines. Were any proof required of the great aid which these establishments have afforded to the improvement of medical science, and consequently to the health of the community, it is only necessary to look into the comparative statement of mortality in some of the British hospitals at different periods. At St. Thomas's, in 1741, it was about 1 in 10; in 1813, 1 in 16; in the Edinburgh Infirmary within this century, it has diminished from 1 in 14 to 1 in 21; and in the fever hospital of Dublin from 1 in 12 to 1 in 20.

But although hospitals, under proper regulations, cannot be regarded as nuisances, yet the exposure of the community to infectious diseases, by people who are infected with them freely intermingling with society, has always been considered as criminal; and therefore laws to prevent it have been at various times enacted. In the reign of James the First, it was made felony for any one to walk abroad in the streets, having a plague sore running upon him; and at this day it is an indictable offence for any person to pass through the streets, or cause others to pass through the streets, even for medical advice, while they have the small pox upon them. A cursory glance at the history of small pox is sufficient to convince us of the wisdom of this law. Soon after the discovery of America, the Spaniards landed a negro slave, infected with small pox, along with the troops under Don Narvaez, who were sent by Velasques from Cuba, in 1520, to seize Cortes, and send him prisoner to Cuba. The infection soon spread through Mexico, and in a very short time three millions and a half of people were destroyed by the disease in that kingdom alone. (Robertson's America, vol. iv, b. 8, note 1). In 1707, the small pox broke out in Iceland, and destroyed sixteen hundred persons, one-fourth of the whole population. It is unnecessary to repeat proofs of the frightful extent to which the disease has occasionally extended itself;—even since the blessing of vaccination was bestowed upon mankind, I have seen the inoculation of one infant with small pox, introduce the casual disease into a neighbourhood, and the mortality spread far and wide. In an action, the King *versus* Taunton, tried in the King's Bench during the last reign, Mr. Justice Bayley delivered the following opinion. "I hope it is sufficiently notorious, that the causing persons to pass through the streets, who may have small pox upon them, although they are going for medical advice to some person in whom they may have confidence, is an indictable offence; and if that person, instead of attending them at their own houses, as he might do, chooses to direct that they shall, from time to time, be brought or come to him, there is no question that he is liable to an indictment". With respect to small pox, therefore, there is no doubt that the exposure of persons in that disease is legally regarded as a nuisance; but, as much risk attends the exposure of persons with other infectious maladies, and as legal questions may arise upon these, it becomes an object of much importance to discriminate those disorders which are infectious from others which are not so. All diseases which can be communicated from persons labouring under them to those who are free from them, are infectious; some are communicated only by direct and immediate

contact, others through the medium of the atmosphere. Among the first, or strictly contagious diseases, I enumerate plague, itch, syphilis, sibbens, frambræsia or yaws, porrigo, *scutulata* and *decalvans*, nolluscum and elephantiasis: among those communicable both by contact and by the atmosphere, may be arranged typhus fever, dysentery, small pox, measles, chicken pox, influenza, hooping cough, scarlet fever, erysipelas, malignant sore throat, and perhaps Asiatic cholera. These diseases are communicable in every season of the year, in pure as well as impure air; in high and in low situations; and many of them by means of fumes preserved in clothes and substances which have been in contact with the sick, although they may have been removed for some time from them. It is true, that all exposed to contagions and infections do not take the diseases; but it is impossible, previously to the appearance of the disorders, to ascertain who are predisposed, and who are not, and consequently the same precautions are requisite as if all were alike liable to be attacked; and it is on this principle that the quarantine laws have been framed.

In tracing the history of mankind, we find that diseases have arisen, which have diffused themselves over large tracts of countries; and, whatever may have been the source whence they originally sprung, have been carried into, and established themselves in distant parts, either by the passage of those afflicted with them into these parts, or by goods sent from infected places. To prevent this evil, those enactments which have been named quarantine have been framed; and, unless we can disprove the existence of contagion or infection, they cannot be too rigidly enforced. It is contrary to the plan of these lectures to enter minutely into the consideration of contagion; I must take it for granted that diseases are communicable, and can be imported; and, consequently, that quarantine laws are necessary.

It is uncertain when laws for preventing the introduction of communicable diseases were first adopted. The Levitical law contains certain regulations for preventing the extension of leprosy and unclean diseases, both with respect to the persons and the garments of the infected: in the works of Ammianus Marcellinus, some hints are given respecting precautionary measures necessary to be observed to prevent the spreading of contagion; but there is nothing in the works of the early Greek and Roman writers to authorize any opinion that such measures were adopted by them. The first establishment of quarantine is generally believed to have been effected by the Venetians in 1484; and a council of health, consisting of three noblemen, with the title *Sopra la Sanità*, was instituted by them in the following year. The principal business of this council was to inspect the lazarettoes erected in certain places at some distance from Venice, and in which it was required

* See Russell, p. 11.

that all persons and merchandize coming from suspected parts should continue a stated time, fixed by the laws. The example of the Venetians was followed by other countries, as it became more obvious that plague and some other diseases did not originate in some of the parts where they appeared; and the different Governments of Europe resolved that all ships arriving from countries where contagious distempers were known to be frequent, should be admitted only when they brought properly authenticated documents to prove that the country whence they came was free from any contagious distemper when they left it. These certificates are called bills of health, and are distinguished by the terms *clean* or *foul*, as the place where they are obtained is in a healthy or an infected state; and according to their import in this respect the ship and crew are permitted to enter the port and trade, or are forced to perform *quarantine*. Brownrigg, in his work intitled "Considerations on the means of preventing the communication of pestilential Contagion," affirms that the first bills of health were written in 1665, by the consuls of the different commercial nations; but Zegata, in his *Cronica di Verona*, asserts that they were first established in 1527, when the plague a second time made its appearance in Europe. The term *quarantine* implies a period of forty days; and, although Beckman has suggested that this period seems to have been chosen from the idea of the ancient physicians respecting the critical days of many diseases, and the fortieth days was supposed to be the most extreme, yet the origin of this period is by no means well ascertained. It is a curious fact, all these precautionary means against infection were neither invented nor proposed by physicians, but ordered by the police, contrary to their theory.

By an Act of the 26th of Geo. III. which repealed all former laws on this subject, it is enacted "that all ships and vessels, as well his Majesty's ships of war as all others, coming from or having touched at any place from whence his Majesty in council shall have judged and declared it probable that the plague or any other infectious disease highly dangerous to the health of his Majesty's subjects, may be brought; and all ships, vessels, or boats, which may have received any persons, goods, letters, &c. from such vessels, &c. shall be considered liable to quarantine within the meaning of the Act, and to any order of the King in council, published by proclamation in the London Gazette." The penalties for neglect of quarantine are severe. (Russell, p. 111.) The privy council is also empowered to direct, in cases of any highly infectious disease, the destruction of the clothes and bedding of persons dying of such diseases; and to take measures to secure the purification, fumigation, and ventilation of their rooms and houses.

The wisdom of these enactments cannot be doubted; and it is only to be regretted that they are so often evaded, and that infectious disorders are introduced in spite of the utmost rigour of the law. There can be only one sentiment respecting the hardship which they impose upon the uninfected coming from infected places; but the good of the few must yield to the benefit of the many.

When a ship arrives at a port from a suspected place, a boat is dispatched to inquire whether she have any sick on board, and into the nature of her bill of health; but no person is permitted either to go into the vessel or to leave her. If she have any one ill of plague on board, and intimation of this be not given by the captain, he is guilty of felony. On ascertaining the state of the health of the crew, the vessel is ordered into quarantine, according to the nature of her bill of health. In this country, the law in this respect is executed with great laxity; but in the ports of the Mediterranean, and the Adriatic, it is rigorously enforced; and there are lazarettoes of different kinds where the quarantines are performed. If the ship have any of the crew with symptoms of plague, the highest degree of rigour is enforced, and the quarantine continues for eighty days; the goods, before being landed even in the lazaretto, are exposed on the decks of lighters for twenty days, and daily turned. They are then landed, unpacked, and according to their nature exposed to the air. If cotton be part of the cargo, the bales are taken to pieces, and men who are employed for the purpose, throw the whole daily over their heads, for sixty days, and if plague be not communicated to any of them in that time, the cotton is declared clean, and permitted to be taken from the lazaretto. The crew are also confined to the lazaretto, and daily inspected by a medical practitioner, who judges of their freedom from the disease by making them beat their axilla and groins, and observing whether they express any degree of pain; in which case, they are stripped naked, and carefully examined.

If no symptoms of plague have actually appeared on board the ship, and she merely come from a suspected port, then she is ordered to the second description of lazaretto; and the treatment, although nearly of the same kind, is less rigorous. The labourers, instead of throwing the cotton, for example, over their heads, merely bare the arm, and thrust it into the bale, in a naked state, up as far as the shoulder. Twenty days are a sufficient trial in this case, during which, if no disease appear, both the goods and the crew are declared clean. In the third description of lazaretto, the goods are merely landed, and the crew detained for the space of twenty or forty days, as circumstances are more or less favourable. The last kind of lazaretto is a place merely for those sus

pected of having come from an infected port, in which the crew are confined for a week; and, if nothing disadvantageous to their health appear in that time, they are declared healthy. Such is the usual manner of performing quarantine. The services of the medical man are required only to examine the crew and passengers, under the two first species: and in both cases, it is of much importance that he should be aware of the nature of plague and other infections, to be able to decide at once, on the first appearance of the disease. If plague appear during the period of performing quarantine, and the patient die, the body is buried within the lazaretto, and the grave filled with quicklime. Should any of you, gentlemen, be placed in a situation where you are likely to be called upon to perform the duty of inspection, and the state of the pulse is necessary to be ascertained, you should bear in remembrance that the finger should be dipped in oil, so as to interpose a medium between the finger and the skin of the patient: and this has been found a sufficient safeguard to the physician. In examining a patient, also, the practitioner should stand on the windward side of the patient, to afford a chance of the infectious matter emanating from the diseased person to be wafted from him.

The long immunity of Great Britain from plague, has produced much laxity in the administration of the quarantine laws; but it ought to be recollected that goods are shipped for Europe at all times from ports in the Levant, and plague may again appear amongst us when it is least expected. If the experiments of Dr. Henry on the influence of an elevated temperature in destroying the virus of contagion prove available, and there is every reasonable expectation that they may do so, much of the severity of the quarantine laws might be safely relaxed; but, in the present state of the question, the danger of either relaxing or abolishing them is great and obvious.

When danger presses greatly, cordons of troops are employed to prevent any communication between clean and infected places. These consist of soldiers stationed in a circle around the town, at every point by which any person may either pass from or approach the town. The value of such preventive measures is supposed to be fully established; and numerous instances might be brought forth of their apparent sanitary influence; but I will mention one only. The city of Zaripta, which stands in the direct line of the progress of the Asiatic cholera from India, was isolated in this manner, and completely escaped the ravages of this desolating scourge of the present race of man.

The question which naturally arises out of the details which I have thus placed before you, is—in what manner, and by whom is a disease to be ascertained to be such as

to demand the precautions of quarantine, and the other measures usually adopted for preventing its introduction into any country or city? The second part of this query is easily answered—the determination of the character of a suspected disease must be left to the physician; but the manner in which he is to decide the question is not so easily replied to. If I take, as an illustration, the history of the opinions which have been advanced respecting the character, as far as regards its communicable power, of Asiatic cholera, nothing can more strikingly demonstrate the difficulty of arriving at truth, in such an investigation. One set of men of high reputation and undoubted medical learning, maintain that the disease is contagious; others of equal acquirements decide the contrary; how is this diversity of opinion to be reconciled? I confess that I am incapable of solving the difficulty; and, therefore, instead of attempting it, I will endeavour to hold up to you the feeble lamp, from which so weak a ray is shed to guide our footsteps in this obscure labyrinth. Let us take cholera as the object of our inquiry. Is it infectious or communicable? By this term is understood, not simply that it may pass from one individual to another, but that it may pass from persons, or clothes containing its fomes, and be communicated to others through the medium of the air. In arranging the arguments on both sides, we must admit that it must have spontaneously arisen, although we are perfectly ignorant of the circumstances under which this happened.

The chief arguments in favour of its infectious character are the following:—1. It has spread over countries which, in respect of climate, soil, relative elevation, and population, differ greatly from those of the spot in which it first displayed itself. 2. Its progress has been uniform and progressive; often opposed to violent monsoon winds. 3. Bodies of troops in motion have been attacked and retained the disease, while it was unknown to the fixed inhabitants of the country through which they passed: and one of two corps in a camp has been attacked and the other has escaped. 4. Ships arriving from other parts of the world have never suffered before reaching the shore; and in India, the instances of the disease appearing at places immediately after the corps of troops suffering from it, are very numerous. 5. In its progress, cholera has travelled chiefly by the great roads, affecting places on either side, without extending to those situated at a distance from them. This of itself would almost appear conclusive. Epidemic diseases spread extensively over countries; and to use the words of a poet—

— “the circling sky,

The wide enlivening air, is full of fate.”

6. The sick in hospitals, labouring under other diseases, lying near patients ill of

cholera, have been attacked by the disease; servants have sickened after attending their masters, who have died of it; and medical officers in regiments, after intimate intercourse with the sick, have been seized, whilst all the other officers in the same regiment have escaped. Lastly, places surrounded by cordons, and guarded by strict quarantine laws, have escaped, although in the direct progress of the disease. Such are the principal arguments advanced in support of the infectious nature of this disease; let us now examine the contrary opinion. Another fact supports strongly these opinions—namely, the examination of the bills of mortality. 1. The direction in which the disease has progress, has been too uniform to depend on infection. 2. Countries through which troops suffering from it have passed, have remained exempt from the disease. 3. The disease seems to wear itself out in a short time in any place where it has raged, and yet appear with resuscitated vigour on its arrival at another place; where again, however, it is again in a short time stripped of all its fearful qualities, and rendered impotent as before: and thus, to employ the descriptive language of an elegant writer on pestilence, Dr. Hancock, “like some vagabond intruder, who disguises an enormous but short lived voracity under the semblance of impaired appetite, his visits are characterized from place to place, wherever he is permitted to gain a footing in this habitable globe.”

Having thus stated the evidence, the decision ought to follow; but the chain of evidence is incomplete, nor can it be considered as complete, unless we are put in full possession of every circumstance connected with the nature, localities, habits, and police regulations of those places which have suffered, and those which have escaped the ravages of the disease: filth and defective nutriment, hurry and fatigue, anger, intemperance, and the depressing passions, act powerfully as predisposing and accelerating causes of pestilence; whilst the opposite of these conditions, cleanliness, a full and generous diet, temperance, calmness, and regularity, not only operate as prophylactics but as antidotes. These facts are particularly adverted to, gentlemen, to demonstrate to you the importance of topographical inquiries in medical science; the dangers and difficulty of deciding on partial evidence; and the wide field of investigation which lies open before you. In the mean time, in every season of public alarm, it is the duty of the physician, if the smallest doubt exists respecting the real character of a prevailing malady, remaining on his mind, to lean to the side of caution; and if he cannot pronounce decisively, to avoid precipitation in acting; even should contagion and infection be proved to be really bugbears, it is better, in the meanwhile, strictly to enforce the quarantine laws, than

to risk the introduction of pestilent disease in any of the protean forms which she assumes in visiting the guilty abodes of mortals, to draw the incumbent cloud of death over the living.

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LECTURES

ON THE

PHYSICAL EDUCATION AND DISEASES OF INFANTS, FROM BIRTH TO PUBERTY,

BY DR. RYAN,

Delivered at the Medical School, Westminster Dispensary, Gerrard Street, Soho;

Session 1834-35.

LECTURE XXXI.

Spinal Deformities in Children, from the Sixth Year to Puberty and Adult Age.

GENTLEMEN—It remains for me to direct your attention to several other congenital deformities; those which occur in childhood, puberty, and the adult age. There is no class of diseases of greater interest to the medical practitioner than spinal complaints, as they are the fertile source of an immense number of nervous and other disorders, which are too often ascribed to other causes.

Spinal deformities are not common to new born infants, but exceedingly so to children from the eighth year to adult age. Every well-informed practitioner knows, that lateral curvature of the spine, excoriation, or hump-back, and incurvation of it, bending inwards, with elevation of one shoulder, must derange the functions of the organs in the head, chest, and abdomen. Teale, Tate, Addison, Barlow, Brown, Copland, Harrison, Griffin, and Beale, have most admirably illustrated this point in their writings, during the last few years. They have shewn that most of the disorders termed nervous, hysterical, digestive, &c. &c. are caused in girls and women, by irritation in the spinal contents, or by curvature of the vertebral column. I daily witness several examples in proof of this statement, in private, hospital, and dispensary practice.

Young girls, from the age of twelve years upwards, and unmarried females, from the adult age, to thirty-six years, very generally complain of pain in the left side, under the false or short ribs, sense of choking, as if a ball were in the throat, (*globus hystericus*), excessive nervousness, absence, or derangement of menstruation, the evacuation being too small in quantity, or excessive, of a dark colour, and accompanied by great pain, (*dysmenorrhoea* or painful menstruation).

This train of symptoms is usually caused by more or less spinal irritation, or deformity. The spinal marrow, which is a continuation of the brain, or at least possessing similar functions, cannot be pressed on or stretched

in the slightest degree, without deranging the functions of all the nerves which are given off beneath the injured part; in the same manner as pressure on the nerves of the arm, when the limb is placed on the back of a chair, will benumb all the parts below the seat of pressure. But every one acquainted with anatomy knows, that the sensations of the nerves of the spine, below the seat of deformity or pressure, are transmitted to the organs of the abdomen, chest, and head, through the great sympathetic nerve, which is connected with the brain and spinal brain, and with all parts of the body. It is for this reason, that if there is curvature or irritation in any part of the spinal brain, the functions of the organs in the head, including those of the senses, the eyes, ears, mouth, nose;—the lungs and heart, the stomach, liver and bowels, are sooner or later affected, and their functions deranged. If the irritation or curvature occurs in the dorsal portion of the spine, the respiratory organs (lungs), and the circulatory (heart), will be principally affected, the breathing will be laborious, slow, or hurried, there will be palpitation of the heart, a sense of weight or oppression about this organ; and the lungs and heart cannot be affected without implicating the stomach, liver, spleen, intestinal tube, kidneys, genito-urinary organs, in fact, all parts of the body. When the lower dorsal or lumbar region is the seat of disease, there will be derangement of the digestive organs, stomach and bowels, flatulence, sinking at the stomach, popularly termed "sinking at the heart," confined bowels, &c., and sometimes a derangement of the genito-urinary organs, kidneys, ureters, bladder, and generative system. In these cases, the great sympathetic nerve will convey the derangement to the chest and head, and the symptoms above described may be urgent. The vision, hearing, taste, appetite, &c., in a word, all the functions, will become disordered, but those more particularly predisposed to derangement, which will vary in different constitutions. In fact, it is a received axiom in medicine, that derangement or injury in any part of the body may affect and disturb the whole, so intimately are all connected by nerves.

If we bear in mind the fact, that the spine supports the head, chest, and abdomen, and is the medium of communication between the nerves of all parts of the body and the brain, we cannot be surprised that the disorders in all parts of the body, excited by its derangements, are very numerous. It is, therefore, manifest that any cause which injures the spinal brain, or marrow, must excite the multiform disorders alluded to, and that the greatest attention should be paid to this important part of the body.

Deformities of the spine in female children are so common, that there is scarcely a family in the middle and upper classes of society in this country, which has not one or more of

its members affected with some form of this infirmity. Indeed, most of the cases of nervous, hysterical, anomalous affections, which we daily observe, are attributable to spinal disease or irritation. The causes of this disease are various, as want of nutritious aliment, pure air, every thing that debilitates the body during infancy, all acute diseases in the head, chest, abdomen, or limbs, the long continued operation of certain attitudes, tight lacing, stays, want of exercise, &c., all of which weaken the muscles of the back, and the ligaments of the spinal bones, and predispose to deformity. Of all these causes, the want of exercise, effects of attitude, tight lacing, and stays, are the most common. The evils resulting from these are graphically described by many late writers, two of whom I shall quote.

"Among the most commonly adduced causes of lateral curvature of the spine, is the long-continued influence of the same attitude. That this does operate is unquestionable, for multiplied experience has shewn it in many persons whose occupations oblige them to maintain the same posture for many hours daily. Attitude has most effect during the period of growth, but probably too much has been attributed to it; for, without the simultaneous action of other causes, it would not alone be sufficient to account for the production of spinal curvature. The attitude which a girl is obliged to assume at almost all her lessons, unquestionably tends to draw the spine to one side, and to elevate the right shoulder; which, together with want of exercise, stays and tight lacing, operates in the production of that variety of lateral curvature, which the modern system of female education has rendered so common.

"The attitude assumed in needle-work, writing, drawing, the piano, the harp, all have the same tendency to contort the spine; all these occupations are sedentary, and so many of these and other accomplishments are now demanded, that the day is hardly long enough to go through the usual lessons. Boys sit much at their studies as well as girls, but when relieved from them, their amusements are of such an active description, that the alternation of a few hours sitting is really beneficial to them; but girls, in their intervals of relaxation, are too often permitted to take no other exercise than a slow walk for an hour or so. The motions necessary for boyish games, bring into active play the muscles of the back, increase their vigour, and thus enable them to maintain the spine in its proper position, but the action of walking has but little effect on this class of muscles; the omission of those active exertions which youth of both sexes would naturally indulge in, is one main cause of such frequent instances of lateral curvature in girls. Every care is taken to check in girls that activity which is natural to the season of youth—

young ladies should not be romps—such and such exercises are boyish—delicacy of appearance is considered genteel, and we all know how successful the system is in rendering girls delicate. Even in those cases where some degree of active exercise is permitted, the poor child is eternally admonished not to assume the attitude which Nature dictates to relieve for a while the muscles of the back. Miss must not stoop, must always hold her head erect, sitting or standing; the head and chest must be upright, and straight-backed chairs, backboards, and other ingenious arts of tormenting have been invented, to prevent children from adopting the attitudes of repose dictated by Nature. Who would ever think of preventing a horse from assuming that position of repose which he almost invariably takes when standing still, by raising one of his hind legs to rest, while the body mechanically bears on the other three without much muscular exertion—in this position the spine becomes curved; and, it would be as wise to fear deformity in a horse, because he occasionally assumes this position, as in a girl to fear her being permanently round-shouldered, because she occasionally relieves herself from the irksomeness of continually maintaining the same position. Perhaps there is nothing more beautiful or more conclusive of design, than those contrivances in the structure of animals which enable them to assume positions of repose without the expenditure of muscular power. The manner in which birds roost is a familiar illustration; the weight of their body alone acts on the tendon of the flexor muscles of the toes, which thus mechanically grasp the perch without any muscular effort. The position of the horse above-mentioned, and that of the soldier when he stands at ease, are also examples of this provision of Nature."

Dr. Arnott has also made the following observations in his celebrated *Elements of Physics*:—

"Strongly as Nature has expressed herself upon the important subject of exercise among the young, tyrant fashion, with a usual perversion of common sense, has of late times in England formed a school discipline for young women of the higher classes, which wars directly with Nature's dictates; and the consequences have been such, that a stranger arriving here from China, might almost suppose it the design to make crooked and weak backs by our school discipline, as it is the design in China to make little feet by the iron shoe. The result is the more striking, because the brothers of the female victims, and who, of course, have similar constitutions, are robust, healthy, and well-formed. A *peasant girl* is allowed to obey her natural feeling, when her spirits are buoyant, and at proper times may dance, and skip, and run, until healthy exhaustion asks that repose which is equally allowed; and she thus grows up strong and

straight. But the *young lady* is receiving constant admonition to curb all propensity to such vulgar activity; and often, just as she subdues nature, she receives the praise of being *well-bred*. Her multifarious studies come powerfully in aid of the admonition, by fixing her, for many hours every day, to sedentary employment. This adoption of sedentary habits is not only hurtful, by preventing the natural extent and variety of the exercise, and thereby weakening the whole body, but is rendered particularly injurious to the back, by the manner in which the sitting is performed. It would be accounted great cruelty to make a delicate young creature stand all day, because the legs would tire; but this very cruelty is almost in constant operation against the back, as if backs could not tire as well as legs. When a girl is allowed to sit down, because she has been long standing, great care is taken that the muscles of the back, which still remain in action as she sits, shall not be at all relieved; for, from the idea that it is ungraceful to looll, she is either put upon a stool which has no back at all, or upon a very narrow chair with a perpendicular back. The stool relieves the spine more than the chair, because it allows of bending in different ways, so as to rest the different sets of muscles alternately; but the chair forces her to keep the spine quite upright, and nearly unmoved. The consequence soon is, that being first weakened generally, by sedentary habits, and the back being still farther weakened by excessive fatigue, the spine gives way in some part and bends, and the curvature becomes permanent.

"When the inclination of the back has once begun, it is very soon increased by the means used to cure it. Strong stiff stays are put on, to support the back, as it is said, but which in reality, by preventing those muscles from acting which are intended by nature as the supports, cause them to lose their strength; and when the stays are withdrawn, the body can no longer support itself. The only things forgotten are to give proper exercise in the air, and to let the child rest when she is not taking such exercise. The prejudice had at last grown up, that strong stays should be put upon children very early, to prevent the first beginning of the mischief, and that the child should always be made to sit on the straight-backed chair, or to lie on the hard plane; and, it is probable, that if these cures and preventives had been adopted as universally and strictly as many deemed them necessary, we should not have, in England, a young lady whose back would be straight or strong enough to bear the weight of her shoulders or head. It would disgust us to see the attempt made to improve the strength and shape of a young race-horse or greyhound, by binding tight splints or stays round its beautiful young body, and then tying it up in a stall; but this is the kind of absurdity and cruelty so commonly practised

in this country towards what may be well called the faultless of created things."

The pressure of tightly laced stays prevents the motion of the ribs and vertebrae, or bones of the spine (twenty-four in number), which ought to be free and frequently in motion, and renders all these parts a weight on the lower part of the spine, which bends under them, and inclines to one side, the upper often inclining to the other side; so that the back, when carefully examined, often resembles an italic S. Tight lacing benumbs, weakens, and almost paralyzes the muscles; so that these, when the pressure is removed, are incapable of supporting the spine, head, chest, and abdomen, in the erect position, and spinal distortion must result. Boys, who take active exercise, are much more seldom affected than girls, even their sisters, unless when enfeebled by some disease. Many other evils result from tight lacing, as impeded respiration, phthisis, spitting of blood, palpitation of the heart, head-aches, derangement of the digestive organs, and, consequently, of all parts of the body, according to the principles laid down in these remarks. Dr. Gregory has well observed, in his *Comparative View of the Faculties of Man with those of the Animal World*:—

"Some nations have fancied that Nature did not give a good shape to the head, and thought it would be better to mould it into the form of a sugar-loaf. The Chinese think a woman's foot much handsomer, if squeezed into a third part of its natural size. Some African nations have a like quarrel with the shape of the nose, which they think ought to be laid as flat as possible with the face. We laugh at the folly, and are shocked with the cruelty of these barbarians, but think it a very clear case, that the natural shape of a woman's chest is not so elegant as we can make it, by the confinement of stays. The common effect of this practice is obstruction in the lungs, from their not having sufficient room to play, which besides the tainting the breath, cuts off numbers of young women in the very bloom of life. But Nature has shewn her resentment of this practice in a very striking manner, by rendering above half the women of fashion deformed, in some degree or other. Deformity is peculiar to the civilized part of mankind, and is almost always the work of our own hands. The superior strength, just proportion, and agility of the savages, are entirely the effects of their hardy education, of their living mostly in the open air, and their limbs never having suffered any confinement."

It clearly follows from the preceding facts, that to confine a female infant of three, five, or seven years of age, to a restrained posture for hours together, which is generally done in schools, must weaken the muscles of the whole body; because, according to nature's laws, they ought to be in frequent motion

during the day. Delicate scrofulous boys are also seriously injured by this baneful custom.

Rachitism—Rickets.—Infants at the breast are affected with curvature of the spine, as well as deformities of the superior or inferior extremities. The disease is termed *Rickets*, or *Rachitism* (spinal disease). It is peculiar to delicate infants between the sixth month and end of the second year of their age. Its symptoms are loss of appetite, though this may be good or voracious, weakness, and disinclination to walking or motion, or to amusements; the countenance becomes pale, the skin soft, flabby, or dry and hard, the body emaciates, particularly the arms and lower limbs, the mesenteric glands and abdominal viscera enlarge and distend the abdomen, the head and joints, especially the ankles and wrists enlarge, the long bones soften, and being unable to support the weight of the body, bend, and the sternum or breast-bone projects, the ribs are flattened, and the spine becomes incurvated or crooked. The alvine motions are depraved, become pale, white, brown, green, or black; the urine deposits various sediments, the tongue is white, yellow, or brown, the whole body or economy becomes enfeebled and relaxed, the limbs refuse to perform their functions, bend in different directions under the weight of the body, the infant cannot stand or walk without difficulty, it is disposed to remain quiet, or in the recumbent position—it wishes to remain in the mother's lap or in bed—"it is off its feet."

The causes are scrofula, a peculiar diathesis or predisposition; every thing that induces debility, bad nursing, improper or bad food, leaving the infant wet, dirty, too long sitting, exposing it to a cold moist air, confining it in a close apartment, depriving it of exercise in open air, leaving it too long at the breast when the milk is bad and does not contain a due quantity of the solid part of bone (phosphate of lime). The milk is deteriorated after the twelfth or eighteenth month, is injurious to the infant, and debilitating to the mother.

The strength and infirmities of the human constitution are caused by the mismanagement of infants: the foundations of happiness or of misery in after life, are laid, though unconsciously, by nurses. I have already adduced ample attestation of this position; and if further evidence were necessary, I might cite the distressing effects of rickets, with a host of other diseases.

All the bones are softened—of the trunk, spine, and limbs. Dentition is generally retarded in rickets, because the solid part of the teeth is composed of phosphate of lime. Parents very often err in ascribing rickets and deformities of the bones to the backwardness of the teeth, when in fact, the same cause, the want of phosphate of lime in the system, induces both

diseases. During the progress of rickets, the teeth often become discoloured and decayed.

These and other debilitating causes operate most on the children of the poor, and thence we find rachitism most common among them. When the digestive organs are disordered or enfeebled, they cannot extract a sufficient nutriment (chyle) from the food; the blood will become deteriorated—unfit to nourish the different parts of the body, and these cannot perform their functions.

According as the disease advances the head enlarges, sometimes prodigiously; the deformities of the bones increase, the respiration becomes difficult on account of the deformity of the chest; the liver, spleen, and mesentery, become tuberculous and enormous in size, the lymphatic glands in every part of the body degenerate, hydrocephalus, hydrothorax, or ascites supervenes, and the infant presents a hideous appearance, and hectic fever, diarrhoea, and death, soon terminate its existence. Notwithstanding all these symptoms, the countenance is animated, the eyes bright, and the intellect precocious. These peculiarities are explained by the fact, that the brain is proportionably larger than in other children of the same age; the bones of the head are soft, and readily yield to the pressure of the cerebral mass. The organs of sense, the eye, ear, &c. are unusually developed; and the excessive growth of the brain accounts for the precocity of intelligence and of the senses.

On examining the body after death all the organs are softer than natural, on account of the want of nourishment, though some of them may be enlarged. The bones are sometimes so soft that they may be cut like muscle. The cartilages and ligaments are also softened. There is congestion or effusion in either the head, chest, or abdomen, the lungs and abdominal viscera are generally tuberculous and altered in their form, dimensions, or substance. The tissue and chemical composition of the bones are totally altered. The diseased state of the glands shows the close analogy to, or identity of, rickets with scrofula. The same plan of treatment is also employed in both diseases.

Treatment of Rachitism—Rickets.—It is an astonishing, and as yet, an inexplicable fact, that rachitis does not always prove fatal; but ceases after a continuance of a few months or years, the general health becomes good, all the deformities are removed, and the bones become perfectly straight. This fact is attested by all writers on this disease, and I have repeatedly known it verified in my own practice. Dr. Harrison has also informed me, that spinal curvature in children is easily cured, as the bones are readily reduced to their proper position.

The indications of *treatment* are to improve the appetite and general health, and to strengthen the solids by promoting digestion,

and the formation of good chyle or nutriment. These ends are to be accomplished by a most nourishing diet, gravies, jellies, soups, roasted meat, if the infant have the first teeth, and if not, gravy of beef, mutton, lamb, fowl, &c., mixed with arrow-root, sago, mashed with crumbs of good bread or mealy potatoes. Milk, rice, pearl barley, salep, semolina, with wine, are also indispensable. Ale and porter are also allowable in small quantities. Good nursing, including warm clothing, cleanliness, exercise in the open air, when the infant can walk, or it may be carried in the arms of the mother or nurse, provided it be sufficiently clothed, or in a carriage, go-cart, &c. If it be very young and unable to walk, its muscles ought to be invigorated by friction with the naked hand, a soft flesh-brush, or a piece of new flannel, on which some fine flower or hair-powder should be sprinkled to prevent irritation or excoriation of the skin. The friction should be employed over the whole surface of the body and limbs, from one to three hours, morning and evening. It is of no use unless continued for a considerable time, and then it circulates the blood, almost as much as if the young infant were able to walk.

In no case should the infant or child be placed on its feet, until it shews a disposition to assume the erect position. Let it be laid on a sofa, bed, or carpeted floor, and allowed to exert its limbs in the manner nature suggests to young infants in health.

If old enough, various amusing exercises may be devised for it; while retaining the recumbent position, pullies may be first constructed for the arms alone, and so contrived as to allow it to assume the sitting and upright positions. The regimen and diet being regulated, the next part of the treatment is to improve the digestion.

The medicines usually employed as tonics in rachitism and scrofula are quinine, calumbo, preparations of iron and iodine. These may be administered in proper doses, according to the age and constitution of the infant, in white wine, or in powders mixed with honey, treacle, currant jam, jellies, or sugar. I usually order quinine and the preparations of iron in white wine.

The vinum and tinct ferri-mur,—carbon ferri are readily taken by children in white wine. Lime water may be mixed with milk as a common drink, and soda with porter. The following powders are also highly beneficial:—

R. Hyd. c. creta, gr. vj—xij;
Pulveris rhei ℥j—3 ss;
Ferri carbon. gr. vj—xij;
Sacchari purificat. 3 ss;
Pulv. cinnam. comp. ℥ss.

In chartulas vj—xij. divide, capiatj. bis vel ter in die.

When the alvine evacuations are black, calomel should be substituted for hyd. c.

creta, and the bowels ought not to be moved more than twice a day.

The alvine dejections, or motions from the bowels, must be improved by calomel, hyd. c. creta, rhubarb, aromatic powder, and sugar.

A liniment of iodine should be applied to the abdomen when the mesenteric glands are enlarged, and the internal use of this medicine will be most advantageous. The iodine may be used as follows:—

Rx. Potassæ hydriodatis gr. j—iij;
Aque destillatæ, ℥ iij;
Dosis coch. min. bis vel ter in die;
cum saccharo.

The hydriodate of iron is also a valuable remedy. Dose—half a grain to gr. i. in solution, twice a day.

Ointment of Iodine:—

Rx. Potassæ hydriod. gr. v—x;
Adipis preparat. ℥ j;
Tinct. opii, ℥ j.

A drachm of this ointment may be rubbed on the abdomen night and morning, and a flannel bandage applied after its use.

Other remedies will be mentioned when treating of scrofula.

Mineral and vegetable alkalies, especially the phosphates, are strongly recommended by some authors; but the experience of others proves them of little value.

Cold bathing, in common or sea water, and exposure to sea air, are favourite remedies, but ought to be prescribed by medical practitioners only, as they often do much more harm than good in cases of very feeble delicate infants.

Various mechanical contrivances for supporting the spine and limbs are used with advantage, provided they do not impede the action of the muscles or prevent exercise. Many practitioners entertain the strongest prejudices against them, and content themselves with leaving deformities to Nature, when her powers are almost destroyed in weakened constitutions. But any physiologist will assist her when she requires aid. Of these means, more fully hereafter.

It now remains for me to describe the causes and treatment of spinal deformities of children to the age adolescence; and lastly, to notice a source of complicated misery in young females, dependent on spinal irritation.

Curvature of the Spine in Children from the age of Six years to the period of Womanhood.
—Delicate children from the age of six years to puberty, especially girls, are very liable to spinal irritation and deformity, more especially when confined in schools, and deprived of exercise in a pure, dry air. Their general health gradually declines, the appetite fails, and the nature of their disease is often overlooked. Some are affected with cough, copious expectoration, deranged digestion, and depraved motions from the bowels. The chest affection is sometimes so severe as to be considered consumption; and this is gene-

rally the case, when there is relaxation, or inflammation of the ligaments of the upper part of the dorsal spine.

The abdominal affections will be most urgent when the lower portion of the dorsal spine is disordered; and the pelvic organs, the genito-urinary, more particularly the uterus, causing the protean forms of hysteria, when the lumbar spine is implicated at the age of puberty. The whole or a part of these symptoms may continue for a year or two, or alternate with each other; or pain in the chest or abdomen may be experienced, simulating that of inflammation, and is too often treated as such, without any permanent relief, but absolutely with aggravation. If we observe the attitude of the child or young girl, a single glance is sufficient to convince us, that there is spinal relaxation, irritation, or disease.

On examining the spine from the nape of the neck to the sacrum by pressing, or percussing or striking it with the fingers, we invariably discover some painful part, either in the neck, back, or loins, but generally in the dorsal region, or we find one or more of the spinous processes, projecting inwards (incurvation) outwards (excurvation) or laterally (lateral curvature). In any of these conditions it is impossible for the individual to enjoy good health, and great nervousness must be present, with innumerable unpleasant or painful sensations, twitches, cramps, spasms, and pain in those organs situated near the affected part of the spine, and by sympathy in all organs in the body. Thence the frequency of excessive nervousness, indigestion, flatulence, palpitation of the heart, hysteria, hypochondriasis or dejection of spirits in girls and women, confinement of the bowels, disordered menstruation, leucorrhœa, &c., that miserable state of existence induced by the erroneous notions of society which influence female education. Thence the foundation of varied nervous disorders that embitter existence, disqualify for the proper performance of the functions subservient to reproduction, utero-gestation, parturition, lactation, and the maternal care of the offspring. The causes of lateral curvature of the spine, or growing out of the shoulder are the following; 1st, weakness of the muscles and ligaments which support the spine in the perpendicular line, by which it must bend in some direction under the weight of the head and trunk; 2d, a restrained posture, in which the individual must make use of one side or limb more than the other; and 3dly, from every position of the body which throws the spine out of its perpendicular line, and consequently out of the centre of gravity.

Delicate children or young girls whose muscular power is enfeebled, cannot retain one position, even for a few minutes, without uneasy, painful, and irksome sensations; the muscles ache, become tired, and the individual will, unless cruelly restrained, seek

relief by change of position, lean to one side, and tend to throw the spine out of the erect position. Thus, leaning too much on one side, as in writing, drawing, playing the harp, &c., produces the same evil result. Ill-made clothes will cause uncomfortable sensations, which lead the child, if a female, to elevate too frequently one shoulder more than the other, and by this motion twist the spine. The baneful practice of compelling a female child to sit up for hours on a stool, chair, or form, without the least support to the back, is the commonest cause of deformity; she obeys the command, but to relieve her aching muscles, leans to one side, or bends forwards when unobserved, and at the same time raises the head and projects the neck. Standing too much on one leg, which some children do, or are compelled to do in schools, while repeating their lessons, is another cause of deformity. The most powerful of all these causes is the use of stays or tight lacing, which most effectually weakens the muscles, and inevitably causes deformity. A girl should never wear stays before the age of fourteen or fifteen years, that is, until the muscles and bones are nearly developed. Children in the rural districts possess the finest figures, especially those of the humbler classes, who never wear stays until the age of sixteen or eighteen.

There are different degrees of spinal weakness or rotation and deformity. The muscles may be enfeebled, and the ligaments slightly relaxed, so as to admit of excurvation or projection of some part of the spine in the sitting posture. The effect of the slightest projecting or bending of the spine in any direction, will be pressure on the spinal brain or marrow, and disorder of all the nerves below the affected part, and consequently of all the organs supplied by them, and by sympathy of the whole body. This is the first degree.

When relaxation of the muscles and ligaments continues for any length of time, and curvature is the result, the pressure of the upper and lower vertebræ upon the cartilage placed between them, will cause softening, inflammation, or ulceration of it; the curvature will be considerably increased, and the pain, irritation, and disorder of all the functions augmented. The curvature may implicate three or four of the vertebræ, or sometimes the whole, occupying the spine from the head to the coccyx. This is the second degree, and when overlooked or neglected, will produce destruction of the intervertebral cartilages, and even caries of the bones, constituting the third degree, and causing extreme deformity, as the weight of the trunk above the carious bones will cause it to fall forwards or to one side, form extreme deformity, with paralysis of all parts below the seat of disease, loss of power in the lower extremities, bowels and bladder, involuntary evacuations of feces and urine, sloughing of

the integuments of the pelvis, great prostration of strength, and in general death. But such are the conservative powers of the constitution, that life may be preserved even in such formidable cases, and a union effected by the vertebræ above and below the caries. Much discrepancy of opinion exists as to the part of the spine first affected. Sir Charles Bell, and his relative, the late Mr. Shaw, maintain that lateral curvature always begins in the loins; that the curvature of the dorsal region is consecutive, and caused by the action of the muscles to restore the equilibrium of the head and chest, which was deranged by the inflection in the loins. The majority of Continental writers, and some in this country, Beale, Barlow, &c., are of opinion, that in some cases the primary curvature commences in the dorsal region. This question remains undecided. According to my experience, disease of the spine may commence in any part of the column, sometimes in the dorsal region, and sometimes in the loins. But whatever may be the differences of opinion as to the part first affected, there is one opinion entertained by a vast majority of writers, as to the treatment, which in the varieties of spinal deformity are nearly the same. The improvement of the general health by nutritious aliments, tonics, quinine, chalybeates, recumbent position, exercise of various sorts, gymnastics, traction, friction of the back, shampooing, vapour baths, &c. leeches, counter irritation, in fine, the means about to be enumerated, are most generally employed. The greater part of the day should be spent in lying on a sofa or on an inclined plane, and using such exercises as may be taken in the horizontal position, which tend to strengthen the muscles and restore the spine to its natural form: various means may also be devised to correct bad habits, as leaning to one side, raising one shoulder, &c.

The treatment of the first variety, in which there is relaxation of the muscles and ligaments, is simple and generally effectual. The recumbent position is the first step, confining the patient to a sofa or bed, which will remove the weight of the part of the body above the spinal disease, take off pressure from the spinal brain, and at once diminish or entirely prevent pain, disorder, and irritation. The spine may be compared to an architectural column which has to support a weight, and must necessarily yield, if any portion is disposed to give way. The object is to support the weight on the column and prevent it from pressing on the part which is giving way. It is easy to understand the importance of the recumbent posture. If a delicate child, whose muscles are flabby and unable to support the spine erect, and whose ligaments are relaxed, be placed in the sitting posture, and if we examine its back with the hand, we shall find several of the lower dorsal vertebræ pro-

jecting; but if we place it on its back or face, then the vertebrae cease to protrude, and the spine becomes straight. This simple fact shews the value of the recumbent posture in young children, or girls before the age of puberty. When there is little, if any pain, the patient may take exercise between times, and again resume the horizontal posture. This position should be enjoined as much as possible, without injury to the general health. It is customary in many schools, that weakly children and young ladies should lie down for an hour or two on an inclined plane made of board. This is an injurious proceeding and must be a source of torture. The pressure of the projecting part of the spine on the hard board will cause intense pain, injure the health, and aggravate the disease which it is intended to remove. Dr. Barlow of Bath, who has devoted great attention to the treatment of spinal distortions, makes the following judicious observation on this subject. He says in a letter to Mr. Beale, "I have found a great advantage in dispensing with the 'board,' as it is termed, and converting a common sofa into an inclined plane. This is readily done by any carpenter, a plane raised seven or eight inches at one end, and terminating in a point, being slipped under the cushion. This arrangement excites no observation, a consideration of some moment when the feelings are sensitive; it is always at hand, and will be used freely, when the formality and display of lying down on the board would be repulsive. From the sensible relief afforded, it becomes the favourite repose; and no time being enjoined, the parties lie down and exercise alternately, precisely as the most accurate judgment would direct." (*Observ. of Distortions of the Spine, &c.* By L. J. Beale, &c. 1834).

Mr. Stafford proposes the following contrivance. "The couch or sofa, best adapted for the patient to recline upon should be perfectly flat, and thus the whole weight of the body will be taken from off the spine; it should have a cushion upon it of an equal surface, made with horse-hair or wool, firm and elastic, yielding to the natural incurvations of the spine, and yet of such a consistence as to support the back." (*Op. Cit.*). There are so many popular works on gymnastics, that I shall not attempt to describe them. But if there is much pain in the back, which is aggravated by pressure, confinement to the recumbent position is indispensable, with application of a few leeches over the affected part. Patients affected with this, or indeed any variety of spinal affection, are delicate, feeble, and irritable, and they seldom bear much loss of blood. Rest and repeated leeching in small quantities should be tried; and if these fail, then counter irritation by means of antimonial ointment is preferable to blisters, issues, or setons. It is now generally admitted that issues and setons do

infinite mischief, by injuring the general health, which is always beset by spinal affections. So far from injuring it, we endeavour to restore it, by improving the digestive function, ~~regulating the bowels,~~ increasing the appetite, forming ~~solid~~ ^{rich} chyle, or material for ~~any~~ ^{new} blood. To accomplish these objects, we regulate the bowels with mercury, rhubarb, ~~as above directed.~~ Colocynth, and other purgatives. In ~~cases of~~ youth, or adults, improve the ~~bowels~~ ^{digestive} functions, which, ~~are of different colours, white, brown,~~ black, green, &c., and ~~are~~ ^{are} ~~consequently~~ ^{consequently} ~~effective~~ ^{effective} in odours and we next exhibit ~~various~~ ^{various} ~~other~~ ^{other} powerful tonics, with the most nutritious diet. These means usually succeed: we regulate the exercise in the open air, and in a few weeks or months, we reflect a cure without the use of any mechanical contrivances. But such contrivances are sometimes necessary, and are now so admirably constructed as to remove all objections to them. Among many inventions for ~~removing~~ ^{removing} deformities, it has been ~~proposed~~ ^{proposed} to carry a weight on the head (Shew), as milk-maids are remarkably straight. It should be recollected that such persons have seldom any deformity of the spine, but ~~in general~~ ^{in general} are well-formed, with good muscular development.

In the second and third varieties of spinal deformity, the same indications of treatment, and tonic remedies are necessary, but absolute confinement to the sofa or bed must be enjoined. The degree of irritation or inflammation is greater, and requires a more active use of leeches and counter irritation. The most scrupulous attention must be paid to ~~the~~ ^{the} improving the general health by nutritious aliment, wine, porter, animal and vegetable jellies, quinine, preparations of steel, &c. &c. Sea air and bathing are also valuable ~~adjuncts~~ ^{adjuncts}, but the last must be cautiously used.

In the third variety, caustic issues, setons, and repeated blisters, have been ~~employed~~ ^{employed} until lately, but are now very generally abandoned. In fine, the records of surgery justify the assertion, that a cure is ~~not~~ ^{not} expected in the majority of cases of the first and second variety; and that ~~in general~~ ^{in general} an anchylosis of the vertebrae often takes place in series, deformity occurs, and the individual never survives to an advanced age. There are, however, some cases, in which it is impossible to save life—in which palliation can only be effected. In some cases traction of the spine, by means of pulleys, &c., to reduce the bones to their proper position, is a successful adjunct; and this plan is much employed in this country by Dr. Harrison, Mr. Beale, and I believe, Mr. Amshury. The majority of British surgeons are very much opposed to it, and prefer gymnastics. For my own part, I cannot conceive any scientific objection to reducing subluxation of the vertebrae, as all other bones. ^{adviced there} are ^{of treat-}

ment can alone remove deformity, and re-establish health.

I find a late writer, whose work on Distortions of the Spine was awarded a prize by the Royal College of Surgeons, corroborates my opinion, and adduces the following evidence in its favour. After enumerating the various contrivances for exercising the muscles to natural curvature of the spine, he observes—

“ In addition to the means I have already recommended, and in conjunction with them, I am convinced that cautiously stretching the spine, in some cases, would be found of the greatest advantage. It stands to reason, when the spine is completely thrown out of the centre of gravity, and the curvature is great, that the exercise of the muscles and ligaments will not alone be sufficient to bring it back to its proper form: they are so contracted on one side of the curve, and so elongated and pressed upon by the vertebrae on the other, that their function is almost entirely lost. In this weakened state it is not likely they can be made to act. Stretching the spine, therefore, will effect two objects—the one, the restoring the vertebrae to their places; the other, the bringing back the muscles and ligaments to their natural situations, by which they may be enabled to recover their lost power.

“ The benefit derived from stretching the spine has been more particularly shown by Duppech, by Jalade-Lafond, and others. In proof of its beneficial effects, they have brought forward several cases, of which drawings have been made, both before and after the treatment, where this plan has been employed. In many instances the distortion has been immense, and yet if the spine had not been wholly, it had been nearly, restored to the natural form. The methods they have adopted are two,—a particular kind of machine to be used as a chair, and another as a bed. The patients sit in the former of these, being firmly fixed by a belt strapped round the body above the hips to the seat, and being gradually drawn up by pulleys and other machinery attached to the neck and beneath the ankles on each side; and in the latter they lie on the back, being fixed much in the same manner, only in the horizontal position, and by ropes and pulleys are thus extended. The best of these two machines is the best, because it has not to act against the weight of the head and trunk.”

There is also a most unjust prejudice against the use of spinal supporters, steel stays, &c. The former are now so constructed as to support the spine without pressing on the muscles more than the common stays; I have

repeatedly known great benefit and comfort produced by them. They are used by Sir Astley Cooper, Sir C. Bell, Sir B. Brodie, and all the eminent surgeons of this metropolis. Mr. Beale is also of this opinion. He says, “ Instruments to support the spine are useful as adjuncts to the treatment, so long as the period of life affords a hope of cure; and afterwards they are useful in preventing an increase of deformity, and as conducing greatly to the comfort of the wearer.” He adds, “ There are few cases of lateral curvature, which may not be cured, if properly treated before the cessation of growth. The incurable cases are those resulting from contractions within the chest, consequent on diseased lungs, and those dependent on the effects of inflammation of the cartilages and ligaments, where rigid contractions have place among those parts and the bones;—but these cases are few in comparison with the large number dependent on the other causes enumerated.” After enumerating the means of treatment, he concludes with the following remarks:—

“ In the exercises usually adopted it is essential to fix the pelvis, in order that the body should bend at the loins and the muscles of the back be called into action, otherwise the whole trunk with the pelvis, will move on the heads of the thigh-bones. This circumstance will also point out the absurdity of expecting benefit to result from exercise, while the patient is wearing a steel support, the very object of which is to fix the spine immovably on the pelvis, and thus prevent all possibility of exercise to the muscles of the back and loins. When a mechanical support is used, it should be in the intervals of exercise alone, to be taken off on every occasion when the exercises are resumed.

“ By perseverance in a system of judicious exercise, alternated with repose, lateral curvature dependent on muscular debility may be removed in most cases, and benefited in all. But these means should be employed as early as possible; the longer the parts have been allowed to retain their unnatural positions, the more difficult will be their restoration, for there is a constant tendency in distortions of the spine to increase. We have only to look at the vertebral column, to be satisfied of the certainty of an increase of any existing curvature:—In the natural condition of the spine, the base of one vertebra rests firmly on its successor; but when any part of the spine deviates to one side, the tendency of the superior vertebrae to slip is obvious, the basis of support being lost, and the chain of bones only kept together by the ligaments and muscles. From this consideration, it is obvious that children never can outgrow these distortions.”

Pigeon, or Chicken Breast.—These terms are employed when the sternum or breast bone projects, and appears sharpened. They are occasionally congenital. When infan

* A Treatise on the Injuries, the Diseases, and the Distortions of the Spine, founded on an Essay to which the Jacksonian Prize for 1826 was adjudged by the Royal College of Surgeons. By R. A. Stafford, &c. 1833.

are born with this deformity, they rarely survive beyond the second or third year; but if they live beyond this period, they are weak, emaciated, and miserable objects of disease. This distortion is generally caused by rickets, scrofula, or spinal curvature, or when any part of the lung has been obliterated by disease. (Laennec, Delpech, and others.) When this deformity arises from rickets, or scrofula, the treatment recommended for the removal of these diseases should be employed. All means which expand the chest should be recommended, especially dumb-bells. Mr. Beale advises the following exercise:—

“A mode of exercise applicable to these and many other cases, is to raise a weight attached to a cord passing over two pulleys: the other extremity of the cord should be attached to the middle of a lever, which is to be held by both hands: the patient standing, and even raising himself on his toes, to reach the handle of the cord, seizes it with both hands, alternately drawing up the weight and letting it fall: in this manner, the muscles of the arms, chest, neck, and back, are brought into action, and invigorated by exercise. A pole held by the hands, with the arms extended, and moved in various directions, is also a good kind of exercise. To these means must be added friction and pressure on the chest, before and behind, performed not once, but several times during the day, and for a quarter or half of an hour each time. Pressure on the prominent part of the thorax, applied so as to correspond with the motions of respiration, I am informed by my friend Mr. Coulson, has been extremely beneficial in many instances where he has recommended it. The great perseverance required in such cases, makes it difficult to find any person, except the mother, who will do a child justice: but a sufficient number of cases are recorded of the great benefit derived from the use of these means, when applied in early life, to afford ample encouragement to give them a fair and efficient trial.

“In the intervals of friction, and during sleep, an instrument should be worn, which will apply constant pressure on the projection: this is effected by the addition of springs and pads, similar to those of a common truss, passing from the back-plate of a shoulder-strap, or collar, and exerting counter-pressure on the seat of the malady.”

Lastly, it remains for me to notice inflammations of the joints in new-born infants—a disease only lately described, and for a knowledge of which, I am indebted to my friend, Dr. Alexander Thomson, who favoured me with a translation of a French Thesis on the subject. It is as follows:—[The paper published in Dr. Ryan's London Medical and Surgical Journal, vol. 6, p. —, by M. Terrise, on acute arthritis in new-born infants was read.]

At our next meeting, I shall describe the congenital Displacements of Soft Parts.

A NEW PRACTICAL FORMULARY.

OF HOSPITALS, OR A

Collection of Formulae of the Civil and Military Hospitals of France, Germany, Italy, Spain, Britain and Ireland, &c., containing the indication of the Doses in which simple substances, magistral and official Preparations of the Codex are administered, the use of new Medicines, and general receipts on the art of prescribing. By M. EDWARDS, M.D., and P. VAYASSEUR, M.D., of the Hospitals of Paris—1834. Translated and augmented by M. RYAN, M.D. Sec. Sec. 1864

(Continued from p. 276.)

PROTO-IODURET OF MERCURY.

One of the most irritating poisons, which appears to unite the two properties of which it is composed. In very small doses it is employed in the treatment of scrofulous affections accompanied with syphilis, enlargement of the glands, &c.

INTERNALLY. Gr. $\frac{1}{4}$ — $\frac{1}{2}$, in pills.

Pills of the Proto-ioduret of Mercury. F. de M. (Proto-ioduret of mercury, gr. i; extract of juniper-berries, gr. xij; liquorice powder, q. s., for viij pills, each of which contains $\frac{1}{8}$ gr. of the proto-ioduret). From iv—viij daily, commencing with the smaller quantity, and gradually increasing it.

In syphilides.

EXTERNALLY.

Pommade of the Proto-ioduret of Mercury. F. de M. (Proto-ioduret of mercury, gr. xx; lard, $\frac{3}{4}$ iss.

Employed in venereal ulcerations.

The *Pommade d'Iode* of the H. St. L. differs from the preceding in the quantity of the proto-ioduret being increased to, gr. xxxvj, and by the addition of gutt. xv of the essence of bergamot.

The *Pommade of the Proto-ioduret of Mercury* of the H. St. L. contains, No. 1, \mathfrak{D} ij; No. 2, \mathfrak{D} ij; and No. 3, \mathfrak{D} iv, of the proto-ioduret of mercury to \mathfrak{Z} ij of lard. M. Lugol employs them in the treatment of cutaneous scrofula, complicated with syphilis.

DEUTO-IODURET OF MERCURY.

The deuto-ioduret of mercury possesses the same properties as the proto-ioduret, only it is more energetic. It is employed in the same cases; but its administration requires great prudence.

INTERNALLY. Gr. 1-16th— $\frac{1}{2}$, in solution or in pills.

Pills of the Deuto-ioduret of Mercury. F. de M. (Deuto-ioduret of mercury, gr. i; extract of juniper-berries, gr. xij; liquorice powder, q. s., for viij pills, each of which contains $\frac{1}{8}$ of a gr. of the deuto-ioduret). Two of them should be taken morning and evening, and the number gradually increased to four.

Alcoholic Solution of the Deuto-ioduret of

Mercury. R. de M. (Deuto-ioduret of mercury, gr. xx; alcohol (36°) 3 iss; 26 drops contain about $\frac{1}{2}$ of a grain of the deuto-ioduret). Gutt. x—xxx, and even more, progressively increased, in a glass of distilled water.

[Common water will speedily decompose it. This medicine is very efficacious in syphilis complicated with scrofula. T.]

Sulphuric Ether with the Deuto-ioduret of Mercury. R. de M. (The same properties as the preceding preparation). Gutt. x—xv.

EXTERNALLY.

Pommade of Deuto-ioduret of Mercury. F. de M. (Deuto-ioduret of mercury, gr. xx; lard, 3 iss).

The *Pommade d'Iode*, No. 2, of H. St. L. contains gr. xv of the deuto-ioduret of mercury to 3 ij of lard, and gutt. xx of the essential oil of bergamot.

These pommades are employed in cases of tubercles and syphilitic ulcerations; they are very active, and require a great deal of care in their administration.

CYANURET OF MERCURY.

A corrosive poison, very nearly as energetic as the deuto-chloride of this metal. It is administered with success in obstinate venereal diseases, and M. Bielt employs it with great success, externally, in cases of humid tetter, accompanied with violent itching. The greatest prudence ought to be observed in its administration.

INTERNALLY. Gr. 1-16th— $\frac{1}{2}$ daily, in solution or in pills.

Anti-syphilitic Liquor. H. de la Mat.

R. Hydrarg. cyanureti, gr. iv;

Aquæ, 3 viij.

Solve. Dosis, 3 iv—3 i; partitis vicibus.

An ounce contains $\frac{1}{2}$ gr. of the cyanuret.

Tincture of the Cyanuret of Mercury.

(Parent.)

R. Hydrarg. cyanureti, 5j;

Alcoholis, 3 x;

Extr. buxi, 3 iij;

—— aconit. nape.,

Ammon. hydrochl., 3 iij;

Olei anisi, 5j;

Aquæ, 3 xiv.

A tea-spoonful to be taken night and morning in half a glass of sugar and water, gradually increasing the dose 3 ss—j. Each ounce contains one grain of the cyanuret.

In obstinate venereal diseases.

Pills of the Cyanuret of Mercury. (Parent.)

R. Hydrarg. cyanureti, gr. vj;

Opii pulveris, gr. xij;

Miccæ panis, 3 j;

Mellis despum, q. s.

Fiat massa in pilulas xcvi dividenda, quarum sumantur una mane nocteque.

Each pill contains 1-16th of a grain of the cyanuret, and $\frac{1}{4}$ th of a grain of opium.

EXTERNALLY.

Pommade of the Cyanuret of Mercury.

H. St. L.

R. Hydrarg. cyanur. gr. xvj;

Adipis, 3 j;

Olei limonis, gutt. xv.

Misce.

Employed in certain cases of humid tetter, accompanied with inflammation and itching.

PROTO-NITRATE OF MERCURY.

In large doses it is a corrosive poison: in small ones an anti-syphilitic, generally administered in a syrup. It is used externally as a stimulant, detersive and escharotic in the treatment of tetter.

INTERNALLY.

Syrop de Bellet.

R. Hydrarg. proto-nit., 3 iij;

Aquæ acidulatæ, 3 x.

Solve, et adjice,

Syrupi simplicis, Oiss;

Ætheris nitrosi, 3 i.

Misce.

From 3 iij—iv in a mucilaginous vehicle. Each ounce contains a little more than gr. 4 $\frac{1}{2}$ of the nitrate.

Mercurial Potion. H. of Italy.

R. Syrupi Bellet.,

Aquæ destill. 3 ss.

Fiat potio, omni mane capienda.

In scrofulous affections.

EXTERNALLY.

Onguent Citrin. P. Employed in frictions in scabies.

Eau Mercurielle. P. To excite venereal ulcers.

Pommade Antidartreuse. H. of Italy.

R. Hydrarg. proto-nit. 3 i;

Unguent. cucumis, 3 ii.

Fiat unguentum.

Employed in circumscribed tetter.

Mercurial Lotion. H. St. L.

R. Hydrargyri. 3 ss;

Acid nitric. 3 j.

Solve, et adjice,

Aquæ destill. Oiss.

Fiat lotio.

In Scabies. 3 ss. should be used morning and evening. This is a very commodious preparation and is very successful.

RED OXIDE OF MERCURY.

A stimulant and escharrotic employed only externally in chronic ophthalmia attended with ulceration of the borders of the palpebræ. It is also used to destroy fungous flesh, and to excite certain venereal ulcerations. It may be absorbed and cause serious accidents if great care is not taken when employed.

[It should be most finely levigated in ointments as directed in the British Pharmacopœias. T.]

EXTERNALLY.

Pommade Ophthalmique de Regent. P. About the size of a pea, applied to the borders of the palpebræ.

The Pommade avec l'oxide de mercure, or, Pommade de Regent, of the H. de la Mat. is composed of red oxide, 3 iss; fresh butter, 3 iij, and 3 iv of white wax. It is employed in the same manner as the preceding.

Caustic Powder of Plenck. H. of Germ.

Rx. Oxyd. hydrarg. rub.,
Alum. calcin., ā ā 3 ij;
Sabinæ, 3 ss.

Misce.

Employed to repress the fungous flesh of venereal ulcerations, &c.

Mercurial Honey. (Swediaur).

Rx. Oxyd. hydrarg. rubri,
Sacchari. ā ā 3 i.

Tere et adice.

Mellis, 3 iij.

Misce.

Employed in dressing syphilitic ulcerations.

Pommade of the Red Oxide, used in Ophthalmia.

Hot. D.

Rx. Oxyd. hydrarg. rub. gr. x;
Zinci sulphatis, gr. x;
Adipis, 3 i.

Fiat unguentum.

About the size of a pea should be applied to the eye-lids. It is used in chronic ophthalmia, especially when the inflammation is increased by a scrofulous habit of body.

At the Hot. D. a Pommade is used in ophthalmia, composed of 1 part of red oxide, and 8 of an ointment of roses.

Pommade de Desault. Hot. D.

Rx. Oxyd. hydrarg. rub.,
Acetatis plumbi,
Aluminis,
Oxydi zinci, ā ā 3 ij;
Deuto-chlorueti hydr., gr. xxv;
Adipis, 3 iss.

Misce.

Employed in the same manner as the preceding.

Onguent Brun. H. Militaires.

Rx. Oxyd. hydrarg. 3 j;
Unguent. basilici, 3 i.

Fiat unguentum.

Employed in dressing atonic wounds and ulcers, as a slight stimulant.

The onguents brun of the H. des Ven. is composed of gr. iij of the red oxide to 3 i of lard.

BLACK OXIDE OF MERCURY.

This preparation is employed by German practitioners in those cases in which we (French) use the metallic preparations of mercury well triturated. It is not much used in France; its composition is subject to variation.

INTERNALLY. Gr. 4—v daily, in pills.

Pilules de Hanhemann. H. St. Ant.

Rx. Oxyd. hydrarg. rub. 3 i;
Gummi acaciæ,
Sacchari, ā ā 3 ss.

Fiant pilulæ xxx, dosis j—v quotidie.

Employed in syphilis.

EXTERNALLY. In frictions, gr. x—xx mixed with 3 i of lard, not much used.

RED SULPHURET OF MERCURY. (Cinnabar).

It has the same action as the other mercurial preparations, with the exception of the causticity of the sublimate and the oxides of mercury. It is little used at the present day, except externally, in the treatment of some chronic affections of the skin, exostoses and syphilitic ulcerations, or to combat prurigo pedicularis.

INTERNALLY. Gr. x—xx, in pills or in an electuary.

Poudre Temperante de Stahl. P. Gr. vj—xx.

Boluses of the Red Sulphuret of Mercury.

Rx. Hydrarg. sulph. rub. 3 ij;

Confectionis rosæ, q. s.

Divide in bolos iv, quorum sumat unum mane nocteque.

In obstinate cephalagia.

Analeptic Powder. H. of Germ.

Rx. Hydrarg. sulph. rub. 3 i

Sacchari purific. 3 iij.

Olei cinnamomi, m xx,

In chartulas xx divide, harum sumat unam quotidie.

Eluded as cordial, stomachic, and analeptic.

EXTERNALLY.

Pommade de Cinabre, called No. 4. H. St. L.

Rx. Hydrarg. sulph. rub. 3 iss;

Hydrochlor. ammoniac. 3 ss;

Adipis, 3 ij;

Aquæ rosæ, 3 j.

Fiat unguentum.

Employed with advantage in prurigo pedicularis.

Fumigations de Cinabre. H. St. L. and H. de la Ch.

Rx. Hydrarg. sulph. rub. 3 iss.

They are used in the same manner as those of sulphur.

Employed in the treatment of certain chronic cutaneous diseases and chronic syphilis. They have the inconvenience of causing salivation in a short time.

Mercurial Fumigations. H. des Ven.

Rx. Hydrarg. sulph. rub. 3 ss;

Olibani, 3 ij.

From 3 ss—i should be put on a plate of iron, heated till it is red, and the affected part exposed to the vapours which arise from it. They are employed in syphilitic exostoses, obstinate ulcerations, &c.

BLACK SULPHURET OF MERCURY.

It possesses the same action as the preceding preparation; it is not often used internally, except as an antelmintic. It is employed externally in the treatment of scabies.

[I have added it to the electuary of sulphur and supertartrate of potash, &c., commonly employed in this country. T.]

INTERNALLY.—As an anthelmintic, gr. v—xxi in pills, or with an electuary.

As a purgative, not much used, gr. viij—xxx.

Poudre Vermifuge Mercurielle. P. Gr. v—xx.

Purgative Electuary. H. de la Ch.

R. Hydrarg. sulph. nig.

Pulv. jalapæ, ā ā ʒ iij;

Resine jalapæ,

Scillæ, ā ā gr. lvi;

Scammonie, ʒ ss;

Syrupi rhamni, q. s.

Misce, ʒ ss—ij sumatur pro dose.

As a drastic purgative, in dropsies and Plumber's colic.

ACETATE OF MERCURY.

Not much employed at the present day. It enters into the composition of several officinal preparations.

INTERNALLY.

Pills of the Acetate of Mercury. H. of Eng.

R. Hydrarg. acetatis;

Opii,

Camphoræ, ā ā gr. xxx;

Syrupi papav, q. s.

Divide in pilulas xxx, quarum sumat affm vel duas in die.

In syphilis.

Dragées Antisyphilitiques de Keyser. (Cadet.)

R. Hydrarg. acetatis,

Gum. acaciæ, ā ā ʒ ss;

Sacchari, ʒ iij;

Pulv. althææ,

— amyli, ā ā ʒ iij;

Mucilag. acaciæ, q. s.

Fit massa, in pilulas gr. i, dividenda, quarum sumat duas mane nocteque.

The number should be gradually augmented to fifty a day.

Each pill contains 1-7th gr. of acetate of mercury.

RED-DENTED SULPHATE OF MERCURY, OR TURBITH MINERAL.

Formerly employed as an emetic and diaphoretic; at present it is scarcely ever used, except externally in the treatment of indolent tetter.

[It is sometimes used in this country in hydrophobia. T.]

EXTERNALLY.

Pommade de Turbith Mineral. H. St. L.

R. Turbith mineral, ʒ i;

Adipis, ʒ i.

Lento igne simul liquefac.

The *Pommade Antithetique* of the H. des Van is composed of ʒ i of the turbith and lardanum, ʒ ss of sulphur, and ʒ i of lard. It is employed in herpes, when there is not much inflammation.

IODINE.

In large doses it is a very energetic irritative poison; in smaller ones it exercises a

general stimulating influence, especially on the mucous membranes; it also acts upon the thyroid, mamillary glands, &c., in the latter of which it causes more or less atrophy. It is employed with great success in the treatment of bronchocele, scrofula, enlargements and indurations of the glands, the testicles, &c., of blenorrhagia, scirrhus tumours, &c. It is also used as an emmenagogue. In all cases it should be administered with the greatest care, and its use should be discontinued as soon as emaciation is perceptible.

[The discovery of iodine, as a remedy for every form of scrofula, and for a great number of other tedious and hitherto incurable diseases, is one of the most satisfactory and important. A brief account of this extraordinary remedy deserves the most attentive consideration. Iodine was discovered in 1812, by M. Courtois, a manufacturer of saltpetre in Paris, who, in procuring carbonate of soda from sea-weeds, observed that metallic vessels were corroded by the residual liquor. The newly-discovered substance was examined by Clement Desormes, and its real nature determined by Gay-Lussac, Sir H. Davy, and Dr. Wollaston—stimulant, absorbent, diuretic, emmenagogue. It was first employed by Dr. Coindet, of Geneva, as he considered that this substance was the active principle in burnt sponge. It was first recommended to the profession in this country by Sir Andrew Halliday, after his return from the continent in 1819; and in 1821, he published a paper upon it in the *London Medical Repository*, detailing its various preparations, their uses and advantages.—(See *Lond. Med. and Surg. Journ.* 1832, v. i, p. 96.) Dr. Manson, of Nottingham, commenced his trials of this remedy in March, 1821, and from that period to August, 1825, when his work on it was published, he had prescribed upwards of 180 ounces of iodine, and therefore his experience was extensive. He found it remove 116 cases of bronchocele, palsy arising from tumours or effusion in the brain, chorea, scrofula, fistula lachrymalis, nine cases of deafness from obstruction in the eustachian tube, dysphagia, white swelling, and in morbus coxarius and distorted spine considerable relief was afforded. Dr. Gairdner had published an essay on iodine in 1824, in which he decried its value, and argued that it was a dangerous remedy in some cases. He advised it in tuberculous diseases of the chest and abdomen; in phthisis and mesenteric disease; but Dr. Baron, of Gloucester, had previously recommended it in large doses in phthisis. He likewise found it useful in ascites, as also did Dr. Van der Kolk, of Amsterdam, in 1826. During the last few years, a vast number of writers had published, in the periodicals, their opinions in favour of this remedy in various diseases: but, in 1829-30, M. Lugol, of Paris, tried it on a much more extensive scale than any of

his predecessors, and reported so favourably of it, that the Academy of Sciences appointed a commission to observe his practice at the Hospital St. Louis, and these reported in the strongest terms of its inestimable value. They declared that iodine was a cure for every form of scrofula, whether glandular enlargement in the neck, axillæ, groins, or mesentery; in ulcers, however extensive; in abscesses, fistulæ, caries, venereal affections; in scrofulous habits; in cancerous ulcerations of the face and scalp; in strumous ophthalmia producing blindness; in cutaneous scrofula of the nose, upper lip, and cheeks; in large abscesses of the neck, fistulæ of the thigh, knee, &c.; white swelling of the elbow, knee, and shoulder; in ulcerations of the hip, caries of the vertebrae, lumbar abscesses, and caries of the maxillary bones. A vast number of other diseases have been relieved by iodine. Certain disorganizations of the uterus and ovary.—(Montgomery, in *Dub. Med. Trans.*, 1830; Ryan, in *Lond. Med. and Surg. Journ.*, 1832, v. i).—I have since used it successfully in scirrhusities of the uterus and breast which I deemed to be malignant; in congenital hydrocephalus, in enlargement of the liver, prostate gland, stricture of the urethra, strumous ophthalmia, opacity of the cornea, ankylosis of the ankle-joint, enlargement of the mesenteric glands, rachitism, in hypertrophy of the ventricles of the heart, in obstinate lepra vulgaris of five years' continuance, in periostitis, thickening of the tendinous sheaths of the tarsus and carpus; in ascites, hydrocephalus, hydrothorax, hydrops ovarii, and in hydrocele. Several students witnessed all the cases now enumerated, some which occurred in my practice at St. John's Hospital, the Free Hospital, and the Western Dispensary. Dr. Blake, of Nottingham, and Mr. Hughes, of Holborn, as well as myself, have cured ascites with hydriodate of potass. I have now a case of ascites with very considerable hepatic enlargement under my care at the Dispensary, which is nearly removed by this remedy, though two eminent practitioners declared it hopeless. I have also three cases of hypertrophy of the right ventricle of the heart, declared so by others as well as myself, and examined with the stethoscope by at least twenty medical students, which are astonishingly relieved by this remedy, combined in the manner hereafter mentioned. For the knowledge of the efficacy of iodine for this form of disease, I am indebted to the Formulary of the renowned Magendie. The medicine is of the greatest value in simple hypertrophy, engorgement, or schirrhosity of glandular organs, and of the tissues closely analogous to them; but no one acquainted with pathology will expect that iodine or its preparations can remove all kinds of disorganization, ossification, unless during its formation, calcareous deposits, hydatids, fungus hematodes, &c. &c. I have

never observed emaciation nor glandular atrophy caused by the ioduretted preparations, when used chemically and in graduated doses. It is important to bear in mind, that these, as well as most new medicines, are seldom genuine in the London shops, and consequently fail or do mischief. Dr. O'Shaughnessy, Mr. Periera, and Mr. Everitt, have found the hydriodate of the London shops composed of 70 parts of carbonate, and 30 of hydriodate of potass. It was used in enlargement of the spleen (M'Dowell, of Dublin, *Lond. Med. and Surg. Journ.* 1831, v. vi). Enlargement of the liver (Milligan, Elliotson, *Op. cit.*, 1832, v. ii, and *Lancet*). Scirrhus testis (A. T. Thomson and others). Hydrocele (Ricard). Ovarian dropsy (A. T. Thomson and Ryan). Enlargements of the joints after rheumatism, gout, and syphilis; thickening of tendinous sheaths, amenorrhœa, leucorrhœa, and gonorrhœa; in the first stage of phthisis (see editorial remarks); in chronic hydrocephalus; and, likewise, in stricture of the urethra, œsophagus, and lachrymal passages.

Dr. Williams, of St. Thomas's Hospital, and my colleague, Dr. Clendenning, as well as myself, have employed it in chronic periostitis with success (1835). I have also used it in stricture of the urethra, by placing a weak ointment, melted and cooled, in a portion of a metallic tube which screws on a canula, and on having been passed to the stricture, forcing out the ointment with a stilet whose extremity accurately fills the canula. The exact position and form of the stricture is first ascertained by means of the soft bougie proposed by M. Duchamp. The medicine has been administered internally in stricture, with great success, by the Germans (*Lond. Med. and Surg. Journ.*, 1834; *Dublin Med. Journ.*, 1834). I have also exhibited it in disease of the prostate gland by the mouth, vesical injection, and suppository, with great benefit. There are cases of the last named disease which are not relieved by any medicine. The ancients recommended sea-water and air in scrofula and phthisis, but they little knew that iodine and chlorine were the medicinal agents. T.]

INTERNALLY. Gr. $\frac{1}{2}$ — $\frac{j}{2}$ twice a day, in pills.

Tincture. F. & M. (Iodine $\frac{ij}{2}$ alcohol (36°) $\frac{3i}{2}$; 20 drops contain about $\frac{1}{2}$ gr. of iodine) Gutt. iv—x and even xx progressively three times a day, in half a glass of distilled water, sweetened with sugar.

[M. Magendie states, that a drop of this tincture weighs two-thirds of a grain, while a drop of the different solutions of hydriodate of potass weighs from one to two grains. This should not be forgotten when we administer these medicines in drops. The prescriber should be aware of the exact strength of the tincture or solutions which he orders; and these vary very considerably, as iodine is still excluded from the London and Edinburgh pharmacopœia,

and every physician and chemist has peculiar formulæ. T.]

Ether sulphurique iodure. F. de M. (Iodine gr. vi; æther 3 i; 30 drops contain gr. i of iodine).

Ioduretted Mineral Waters. H. St. L.

	No. 1.	No. 2.	No. 3.
R. Iodinæ,	gr. 4.	gr. 1.	gr. 1½;
Potass. } hydriod. }	gr. 1½.	gr. ij.	gr. iiss;
Aquæ destill.	gr. 3 viij.	3 viij.	3 viij;

Employed by M. Lugol in the treatment of scrofula.

At first 3 vj, then 3 viij of the water, No. 1, daily, in two or three doses. After the first fifteen days, 3 viij of No. 2 is given daily; and in the fourth, fifteen, 3 viij. of No. 3. These liquids should be sweetened at the moment of administration.

Ioduretted Solution. (Lugol).

R. Iodinæ, 3 i;
Potass. hydriod., 3 ij;
Aquæ destill., 3 viij.

Solve.

Six drops of this solution are given twice a day in half a glass of water, sweetened with sugar. Each week the dose should be increased two drops until it has reached xxx or xxxvi drops.

[If the sugar is added to the mixture, a decomposition is effected. T.]

Pills of Iodine. H. of Italy.

R. Iodinæ, gr. i;
Pulv. glycyrrh. 3 j;
Succi sambuci q. s.

Divide in pilulas viij, ex quibus sumantur ij. viij quotidie.

As Emmenagogues.

[In several cases of ovarian, uterine, and other diseases of women, treated with the ioduretted preparations, menorrhagia has been produced. According to M. Lugol and others, the most objectionable mode of using pure iodine is in pills. T.]

EXTERNALLY.

Ioduretted Solutions of Iodine for External Use. H. St. L.

	No. 1.	No. 2.	No. 3.
R. Iodinæ,	gr. ij.	gr. iij.	gr. iv;
Potass. } hydriod. }	gr. iv.	gr. vj.	gr. viij;
Aq. destill.,	Oj.	Oj.	Oj.

Employed in lotions, collyria, and fomentations in scrofulous affections, and injections in fistulous passages, the nasal fossæ, &c.

Rubefacient Solution of Iodine. H. St. L.

R. Iodinæ, 3 iv;
Pot. hydriod., 3 i;
Aq. destill., 3 vj.

Fiat solutio.

Employed to stimulate scrofulous ulcers, &c.

It is also employed in baths, added to a sufficient quantity of tepid water, until this becomes yellow.

Ioduretted Cataplasm. H. St. L.

R. Cataplasm. lini, q. v.;
Solutionis iodine rubefacient.,
q. s.

Misce.

This cataplasm is applied very hot to glandular swellings, chronic glandular swellings, &c.

Caustic Iodine. H. St. L.

R. Iodinæ,
Potass. hydriodat. aa 3 i;
Aquæ destill. 3 ij.

Solve.

This preparation is used when the rubefacient solution fails to excite scrofulous ulcerations, and to apply to cicatrices, &c.

Ioduretted Baths. H. St. L.

	No. 1.	No. 2.	No. 3.	No. 4.
R. Iodinæ,	3 ij.	3 iiss.	3 iij.	3 iv;
Potass. } hydriod. }	3 iv.	3 v.	3 vj.	3 viij;
Aq. distil.	3 vj.	3 vj.	3 vj.	3 vj.

Solve.

This solution is added to a bath, prepared in a wooden vessel.

[At the infirmary for scrofula at Margate, the greatest benefit is produced by warm ioduretted fomentations. The worst forms of scrofula are cured at this institution. T.]

In the ioduretted baths for children, the drachms of the iodine and the hydriodate of potass are changed for scruples of the same ingredients. They are employed with success in scrofula.

Ioduretted Pomades. H. St. L.

	No. 1.	No. 2.	No. 3.	No. 4.
R. Iodinæ, gr. xij,	gr. xvij,	gr. xxi,	3 i;	
Potass. } hydriod. }	3 iv,	3 ij.	3 iiss,	3 iiss;
Adip. } recent. }	3 ij,	3 ij,	3 ij,	3 ij.

Misce.

Used to dress scrofulous ulcers, and in frictions, to swellings of the same nature.

Pomade of Iodine. H. of Italy.

R. Iodinæ, 3 ss;
Adipia, 3 jss.

Fiat unguentum.

Used in frictions upon indolent tumours, &c.

HYDRIODATE OF POTASS.

It possesses the same properties as iodine, except that it is not quite so active. It is used in combination with that medicine in the treatment of bronchocele, scrofula, certain cases of cancer, scorbutic swellings of the gums, hypertrophy of the heart, &c.

INTERNALLY.

Solution of the Hydriodate of Potass. F. de M. (Hydriodate of potass, 3 ss; distilled water, 3 j; a drachm of the solution contains gr. 4½ of the hydriodate). Gutt. xx—3 ss, and even 3 i daily, the dose being gradually increased.

Solution of the Hydriodate of Potass with Iodine. (Coindet).

Rx. Potassæ hydriodat. ʒss;
Aque destillat. ʒi.

Solve, et adde,
Iodinæ, gr. x.

Misce.

Guttæ v—xv, sumantur quotidie ex semicyatho aque cum saccharo.

Atrophic Solution. (Magendie.)

Rx. Potass. hydriod. ʒiv;
Aq. lactucæ sativ. ʒ viij;
— menthæ, ʒij;
Syrup. althææ, ʒi.

Fiat mistura, cujus sumat cochleare magnum mane, nocteque.

The dose may be doubled, if gradually increased.

Employed in hypertrophy of the heart.

[M. Magendie has repeatedly employed this and the succeeding mixture in hypertrophy of the ventricles of the heart with great success. In most cases the disease began to disappear within a month. I have now four cases under treatment, which are yielding to this remedy. T.]

Atrophic Solution with the Tincture of Digitalis. (Magendie).

Rx. Potass. Hydriodat. ʒiv;
Tinct. digitalis, ʒi—ʒij;
Aq. lactucæ sativ. ʒ viij;
— florum aurant. ʒij;
Syrup. althææ, ʒss.

Fiat mistura de qua capiat cochleare magnum mane nocteque.

Employed in the same cases as the preceding, accompanied with palpitations.

[I am in the habit of prescribing the following mixture, at the institutions which I attend, in similar cases, with the most decided success.

Rx. Potassæ hydriodatis, ʒj—iv;
Aque menth. pip. ʒ viij;
Tincturæ digitalis, ʒi—ss;
Liquoris colchici, m xv—xx;
Acidi hydrocyanici, m vi—viij;
Syrupi simplicis, ʒj.

Dosis cochl. med. vel amplum bis vel ter quotidie. T.]

Ioduretted Potion. (Defermon).

Rx. Acid. prussici, gutt. x—xij;
Solut. potass. hydriodat. gutt. xv;
Aq. lactucæ, sativ. ʒiv;
Syrup. althææ, ʒi.

Fiat potio cujus capiat cochleare minimum singula hora.

Employed with advantage in certain pulmonary affections.

[He sometimes replaces the hydrocyanic acid and syrup by an ounce of the cyanic syrup of Magendie. I have employed the former mixture, and also the atrophic solution, with liquor colchici, &c., with apparent advantage in the first stage of tubercular phthisis. T.]

Pills of the Hydriodate of Potass. (Pierquin).

Rx. Potass. hydriodat. ʒijss;
Aq. destillat. ʒij;
Micæ panis, q. s.

Divide in pilulas ei de quibus sumat quatuor mane nocteque.

In hydrocele, white swellings, tumours, &c.

Each pill contains a little less than ʒi 5-6ths of the hydriodate.

EXTERNALLY.

Pommade of the Hydriodate of Potass. (Magendie).

Rx. Potass. hydriodat. ʒss;
Adipis, ʒss.

Fiat unguent.

Employed in frictions, half a drachm at a time, and, at the end of eight days, a drachm morning and evening, in hydrocele, scrofulous tumours, and certain enlargements of the testicles.

[I frequently use ʒss to ʒss in similar cases, over the sculp in congenital or chronic hydrocephalus, in enlargement of the liver, spleen, ovary, uterus, testis, in hydrocele, lepra, and other obstinate cutaneous diseases. When the skin is reddened, I persist until it has assumed its natural colour, and add ʒss of liquor opii, or gr. i—j of morphia to the ointment. T.]

Pommade of the Hydriodate of Potass with Iodine. (Magendie)

Rx. Potass. hydriodat. ʒss;
Iodinæ, gr. x—xx;
Adipis, ʒss.

Misce.

A scruple should be used in frictions in the same cases as the preceding.

IODURET OF LEAD.

It possesses the same properties as iodine, but is much more energetic in its action. It is used in the same cases as that medicine.

[The ioduret of lead is considered by far the most valuable of the metallic compounds of iodine. It does not cause cutaneous inflammation, like the preparations of iodine and hydriodate of potass, and succeeds when all these have failed. It was discovered by MM. Cattereau and Verdet de Lisle.

The dose is from a quarter to half a grain; and the ointment is composed of ʒj to ʒij of lard. This medicine is prepared by adding a solution of 100 parts of the hydriodate of potass to a solution of 750 parts of the acetate of lead. One hundred parts of this compound consists of 54.9 iodine, 45.1 lead (M. Henry (fils), *Journal de Pharmacie*, Mai, 1831). It was discovered by M. Polydore Boullay in 1827, and lately brought under the notice of the profession in Paris, by M. Caventon. T.]

INTERNALLY. Gr. ʒ—j in pills, which should be gradually increased to gr. xij and gradually to gr. xxx—xxx.

Pills of Ioduret of Lead. (Cottareau).R_x. Plumbi ioduret, 3 ss;

Confect. rose, q. s.

In pilulas cxliv divide, ex bis sumatur una mane nocteque, et augeatur dosis gradatim ad xij quotidie.

In scrofula, tabes mesenterica, scirrhus tumours, &c.

EXTERNALLY.

Pommade of the Ioduret of Lead.R_x. Plumbi ioduret, 3 i;

Adipis, 3 j;

Olei limonis, q. s.

Fiat unguentum.

Employed in frictions and to dress scrofulous ulcerations.

[I have found this ointment more efficacious than any other in scrofula of the glands of the neck in children. In one case, a female child aged nine years, had a chain of enlarged glands from one ear to the other, and on each side of the neck to the clavicle. The number affected was 22, and these varied from the size of a hazel nut to that of a pullet's egg. A cure was effected by the ointment under notice. A boy aged seven years had a tumour of great size extending from the right mastoid process to the clavicle. He was cured by this remedy. I also apply in solution ʒi—3 i to 3 vj of distilled water, as a solution for scrofulous and cancerous ulcerations, and morphia or liq. opii. sed. T.]

IODURET OF ZINC.

The ioduret of zinc possesses nearly the same properties as the hydriodate of potass. It is only employed externally in frictions on scrofulous tumours.

Ointment of the Ioduret of Zinc. H. of Eng.R_x. Ioduretum zinc., 3 i;

Adipis preparata, 3 i.

Fiat unguentum cujus, 3 i utatur, bis in die.

In frictions.

IODURET OF ARSENIC.

It possesses the properties of its two compounds. It is only used externally in tubercular herpes.

Pommade of the Ioduret of Arsenic. H. St. L.R_x. Ioduret arsenic, gr. iij;

Adipis prep. 3 j.

Fiat unguentum.

IODURET OF BARIUM.

Its properties are analogous to those of the preceding substances. Employed only externally in scrofulous swellings.

Pommade of the Ioduret of Barium. H. St. L.R_x. Ioduret bari, gr. iv;

Adipis prepar. 3 i.

Fiat unguentum.

In frictions, in slight scrofulous engorgements.

IODURET OF LIME.

[Is not employed medicinally. T.]

IODURET OF SULPHUR.

It possesses properties similar to the preceding substances. It is only used externally in certain cutaneous forms of scrofula and tubercles of the skin.

Pommade of the Ioduret of Sulphur. H. St. L.R_x. Ioduret sulphuris, gr. xxij;

Adipis prepar. 3 vj.

Fiat unguentum.

Another formula contains 8 parts of the ioduret to 144 of lard.

HYDRIODURATE OF IRON.

Stimulant, tonic, possessing the properties of iodine and iron. Recently lauded by M. Pierquin in the treatment of amenorrhœa and leucorrhœa. M. Audral has employed it in phthisis to modify the qualities of the blood, whose hematosiis is imperfect in this disease.

[It has been very strongly recommended by Dr. A. T. Thomson. (See Iron.) T.]

INTERNALLY. Gr. ij—iv a-day, in pills, rapidly increased to gr. xv—xx.

[Dr. Thomson advises it in draughts. T.]

Pastille (Lozenges of Hydriod. of Iron).

(Pierquin.)

R_x. Ferri hydriod. 3 j;

Croci pulv. 3 iv;

Sacchari, 3 viij.

Divide in pastillos cxvi. Dosis viij—x quotidie.

In amenorrhœa and leucorrhœa.

Chocolate of Hydriod. of Iron. Gr. cxv—Oj. Half a cupful a-day. In some cases.

Wine. 3 iv—Oj of Bordeaux. 3 ss morning and evening.

EXTERNALLY. 3 iv. Oj of water, in enemata, injections, lotions, several times a-day.

Baths. 3 ij to any quantity of water.

Ointment. 3 iss—3 j—3 j. In frictions. Night and morning.

(To be continued).

Revised.

Outlines of Botany, Including a General History of the Vegetable Kingdom, &c. By Gilbert T. Burnett, F. L. S., Professor of Botany in King's College. London, &c. &c. 2 vols. 8vo. 1885.

This admirable work is now complete. It has been so frequently and favourably noticed while in progress, as to render eulogium almost superfluous. This is by far the most elaborate and instructive work on the principles of botany that has yet appeared in the English language, and its distinguishing excellence is the able view which it contains of the relation of botany to the other natural sciences.

Considered apart from these, systematic botany is, like mere conchology, an elegant and pleasing pursuit for those who have no graver occupation, but still scarcely worthy to be called a science; considered, however, in its relations to physiology, medicine, geology, and other important branches of natural knowledge, botany expands into a grand science, equally delightful in the objects with which it is conversant, and useful in the sources of information which it opens.

We strongly recommend Professor Burnett's work as a faithful guide to this magnificent study, which is too often neglected altogether, and still oftener misapprehended as to its real objects and extent.

—o—

A Practical Compendium of the Diseases of the Skin, with Cases; including a particular Consideration of the more frequent and intractable form of these affections. By Jonathan Green, MD. M.R. C.S., late Surgeon in the Royal Navy. 8vo. pp. 371. London: Whittaker & Co. 1835.

SEVERAL treatises on cutaneous diseases have issued from the press during the present century; but this branch of medicine is as yet almost totally neglected in our schools. There is one radical defect in almost all the works on diseases of the skin—with the exceptions of Alibert's and Plumbe's—that they have not given the anatomy, physiology, and pathology of the skin, or, to speak correctly, of the integumentary system. The authors of the works referred to, take for granted that the great body of medical practitioners are acquainted with the general anatomy and physiology of the tegumentary apparatus, which is by no means the fact. The Baron Alibert is the only author on dermapathology, who has prefixed a proper account of the anatomy and physiology of the tegumentary system, to the descriptions of its diseases and their treatment; and even his account is very imperfect.

Though many of the diseases of the skin were described by the ancient Greek, Arabian, and Latin writers, there was no attempt made to classify them until the seventeenth century. The first attempt at classification was made by Hoffenreffer in his work published at Tubingen, 1630, and

was very unscientific. He included wounds, ulcers, and fistulae, among cutaneous diseases. Mercurialis published at this period, and divided cutaneous diseases into two classes—those that affected the head, and those that affected the body. This classification was adopted by Turner in 1736, who proposed an additional arrangement according as the diseases were produced by internal or external causes. Lorry was the next writer, in 1777, and he adopted the proposals of his predecessors, while his successor Retz, divided all cutaneous diseases into acute and chronic, in 1790. The next writer was Plenck, who classified the diseases under notice, according to their external characters and made the first step towards a pathological arrangement, 1796. He divided diseases of the skin into fourteen classes:—1, maculae; 2, pustulae; 3, vesiculae; 4, bullae; 5, papulae; 6, crustae; 7, squamae; 8, callositates; 9, excrescentae; 10, ulcera; 11, vulnera; 12, insecta cutanea; 13, morbi unguium; and 14, morbi capillorum. This was the foundation of Willan's classification:—1, papulae; 2, squamae; 3, tuberculae; 4, exanthemata; 5, bullae; 6, vesiculae; 7, pustulae; and 8, maculae. Bateman also adopted this arrangement, to which Baron Alibert, M. Rayer, Mr. Plumbe, Dr. Paget, and our author, oppose well founded objections.

The Baron Alibert attempted to classify diseases of the skin according to the natural order, and he divided them into twelve classes or groups:—1, eczematous dermatoses; 2, exanthematous dermatoses; 3, teigneous dermatoses; 4, dartrous dermatoses; 5, cancerous dermatoses; 6, leprous dermatoses; 7, verolous dermatoses; 8, strumous dermatoses; 9, scabious; 10, haematous dermatoses; 11, dyschromatous; and 12, herpetic dermatoses (1806 and 1832).

Mr. Plumbe and Mr. Dendy (in 1824-27) followed and arranged cutaneous affections according as they were symptomatic of derangement of the alimentary canal, or independent of this cause, or consequent to specific infection; they have, however, adopted the arrangement of Willan, as also have M. Rayer, MM. Cazenau and Schledel, and Dr. Green, with certain modifications in 1833-35. Dr. Paget in a prize essay, published in the Edinburgh Medical and Surgical Journal, 1833, prefers the natural arrange-

ment of Baron Alibert to that of Willan, but properly admits that both are imperfect. It appears, to us, that the classification of M. Rayer is vastly superior to either, because it is based on pathological anatomy and physiology. His classification is the following:—

"I. *Diseases of the Skin*.—1. Inflammations of the skin, including the eight classes of Willan and Bateman, with others; furunculosis, linear (fissure), gangrenous and multiform (syphilitic eruptions); 2, cutaneous and subcutaneous congestions and hæmorrhages; including, cyanosis, vibices, petechiæ, purpura hæmorrhagica, ecchymosis, and dermatorrhagia; 3, neuroses of the skin, exaltation, diminution, abolition of sensibility of the skin, without appreciable alteration in the texture of this membrane; 4, alterations in the colour of the skin—*a*, decoloration, partial or general leucopathia, chlorosis; *b*, accidental colorations; ephelis, lentigo, chloasma, meladermia, icterus, nævus maculosus, and bronze tint produced by nitrate of silver; 5, morbid secretions; ephidrosis, acne, follicular tumours; 6, defects of conformation and texture, hypertrophies, and accidental productions; distention of the skin, cicatrices, vegetations, nævus hæmatodes, subcutaneous vascular tumours, warts, pearly granulations, corns, ichthyosis, horny appendages.

"II. *Alterations of the Appendages of the Skin*.—1. Alterations of the nails and of the skin that produces them; onyxia, increased growth of the nails; spots, change of colour, fall, desquamation, reproduction, &c. of the nails; 2, alterations of the hair and of the follicles that produce it. Inflammation of the bulbs of the hair, accidental colorations canities; alopecia (baldness); matting of the hair, plica, and accidental pilous tissue.

"III. *Foreign Bodies observed on the Surface, or on the Substance of the Skin*.—*a*, Inanimate: dirt, dirt of the scalp of new-born infants, inorganic matters and artificial colorations. *b*, animate: pediculus humanus corporis; *p. capitis*; *p. pubis*; pulex irritans; *p. penetrans*; acarus scabiei; æstrus gortius.

"IV. *Diseases primarily foreign to the Skin, but which may alter it*.—Elephantiasis of the Arabs."

We shall now introduce Dr. Green's classification:—

"I. Inflammations of the skin nearly similar in arrangement to the preceding; 2, diseases which appear with the elementary characters of almost all the above orders, syphilis; 3, diseases which are severally types of new and additional orders, pellagra, purpura, elephantiasis Arabica, cheiloides; 4, original or accidental unusual states of the skin not referable to inflammation, achora; leucopathia (Albinismus);

vitiligo, dischroa-maculæ, lentigo, ephelis, chloasma, and nævus; 5, diseases of the appendages of the skin; more properly of the parts that secrete or support these; epidermes, ichthyosis. Ungues, onychia pili. plica.

We leave our readers to form their own opinions on the comparative merits of this and the former classifications. We shall have an early opportunity of commenting upon them, and shall then express our opinion. And now for the work before us.

Dr. Green prefixes twenty-four pages on the etiology, nosology, pathology, and treatment of cutaneous diseases to his individual descriptions; and shews both judgment and great experience in his remarks. He has long enjoyed a great opportunity of observing cutaneous diseases, as the proprietor of the best establishment in this metropolis for the various kinds of baths. He adduces many cases which defied all remedies except sulphurous and vapour baths; and he intersperses several clinical reports when describing the different diseases. He calls upon the profession to give a fair trial to the use of baths in the treatment of cutaneous diseases; and he might have adduced a body of evidence in their favour, from the Hopital St. Louis and other continental institutions, which would not fail to convince any practitioner of their efficacy. He might have recorded that baths of different kinds were ordered at the hospital mentioned, for internal patients, in 1838, to the number of 18,538, and for external, 82,604; and in 1822, the number for both classes of patients was 127,752—the average number of patients being about 6,000.

It is a singular fact, that baths are very partially used in this country, unless in private establishments such as Dr. Green's and those of Sir Arthur Clarke, and Dr. Wallace, in Dublin. We by no means consider them infallible remedies, but experience has convinced us they ought to be much more frequently employed than they are in this country.

In conclusion, we must observe that this work is not a complete treatise on cutaneous diseases. It is an excellent compendium, evincing great experience and success on the part of the author.

**The London Medical
AND
Surgical Journal.**

Saturday, April 4th, 1835.

**DEFECTS OF THE LONDON HOSPITAL
SYSTEM.**

THOUGH it is not long since we alluded to the defects of our metropolitan hospitals, the subject is one of such importance to the community, and to medical science, that we shall dilate somewhat further upon it. The improved organization of the profession which will doubtless ere long take place, will contribute much to the convenience and respectability of the existing generation of practitioners; but unless some provision be made for extending the means of professional instruction, and the opportunities of scientific research, there is no chance of our being able to keep pace with the progress of medicine in other countries. With minds admirably framed for grave pursuits, by a natural solidity of judgment, and power of application, and with materials which *ought* to be at least equal to those found elsewhere, we shall continue to be, as we now are, outstripped in the pursuit of scientific medicine by our brethren of France, Germany, and even Italy. We do not mean to say that British practitioners are inferior in their treatment of disease; on the contrary, we believe that they have, in this respect, greatly the advantage of those of any other nation; but we do say with regret, that more is at present doing towards enlarging the boundaries of the science on the continent than in England. And who are the men thus profitably employed abroad? Chiefly the medical officers of public charities. And why do not our hospital physicians and surgeons follow their example? Because they are lazy, says one; because they are ignorant, says another; because they are unconscientious, says a third. No one of these allegations is true; they are neither lazy nor ignorant, and they have as much conscience

as other men. They do not fulfil their functions properly, simply because they cannot. In a country like this, where money is the soul of every thing, and an absurd spirit of ostentation pervades the gravest, as well as the most frivolous portion of society, the attention of the practitioner is absorbed by the ways and means of keeping up a wasteful expenditure, which, however opposed to his inclination, he cannot avoid. While the French physician is pursuing science, the English physician is hunting fees; while the former is engaged in establishing a theory, the latter is intent on setting up a vehicle!

In such a state of things, how can it be expected that the English hospital functionary shall devote his time and talents to studies, which however beneficial to the world at large, leave him without the means of living? Were he to do so, he would not merely be a man of science, but a martyr to science.

If the hospital physician or surgeon in this country is to produce results commensurate with his opportunities, he must be allowed an ample salary, which will relieve him from the distractions of private practice, which will enable him to lead a calm and philosophical life, and addict himself with undivided zeal and attention to the important duties of his office. Then, and not till then, may we expect to see medical students adequately instructed—medical literature enriched with great and original practical works—and British medicine raised to the high level which the individual talents and acquirements of its professors entitle it to hold.

Although we do not join in the vituperation that has been showered on our hospital functionaries, there is one remark that suggests itself with respect to them, or rather with respect to the class from which they are chosen. We hope to see the time when the selection of individuals to fill such places will be made from the profession at large, and not from two exclusive orders, the

very paucity of whose numbers renders it unlikely that the most competent persons should be found among them, to say nothing of the fact that the great body of general practitioners, who have been hitherto shut out from public medical offices, are usually men quite equal in learning and science, and much superior in practical skill, to the *pures* of either denomination, who alone have been deemed eligible. It is truly remarkable that among the regulations of almost all our medical charities, we find one or more to exclude the general practitioner. Now this is manifestly the work of the corporations—the grasping, plotting, sneaking corporations; such an idea could never have entered the heads of the directors of hospitals and dispensaries, if it had not been slyly infused by emissaries from Lincoln's Inn and Pall Mall; and when those who preside over such charities find out the real drift of the *no pharmacy* and *no midwifery* clauses in their regulations, they will be struck with astonishment and confusion at having been so woefully gulled, and made the tools of two execrable juntos to insult and injure nine-tenths of the whole medical profession?

As far then as medical officers are concerned, there are two things indispensable for the improvement of our hospital system. First, that the medical officers be allowed a very handsome salary, to induce men of character and talent to give themselves up almost entirely to the cultivation of so fine a field. Secondly, that the medical officers be chosen from the profession, not from two small and by no means distinguished parties in it.

A word in conclusion concerning patients. When a patient is once in one of our hospitals, he has, we believe, generally speaking, not much to complain of; but the difficulty of obtaining admission is a very serious grievance. A sick man has time to die and be decently interred before he can get any

relief; and this arises partly from the necessity of hunting about the town for a recommendation from a governor, and partly from the circumstance of patients being admitted only on certain days, and at certain hours. All this is just the reverse of what it ought to be; in admitting a patient into a public hospital, the only considerations should be whether his case is urgent, whether he is poor, and whether there is room for him. We have known wretched beings remain without advice, without attendance, and almost without the necessaries of life, for a whole week or more, because they could not get a letter, or because they could not reach the hospital at the right time. In England, when a poor fellow comes upon public charity, we take good care to let him feel his situation. In France, a patient goes to the hospital without any feeling of humiliation; he goes as a poor, but not on that account a degraded man, to avail himself of a civil privilege for which he is not indebted to any individual whatsoever. He is secure of a ready admission, and humane, and even courteous treatment. Not so the depressed and cringing object of English charity; he applies to the hospital with the feelings of a pauper, dreading a rough repulse from the *Cerberus* at the door, and, by a natural deduction, not over certain of civil treatment if he gets in.

All this arises from our hospitals being in effect *private* institutions; they are called public only from their magnitude—they are not *national* in their spirit.

We shall, on a future occasion, direct the attention of our readers to the necessity, and possibility, of instituting hospitals over which the government of the country shall have a direct control, and which may thus be rendered at once efficient practical schools, grand centres of medical science, and truly charitable asylums for the diseased poor.

Foreign Medicine.**Extirpation of Goitres.**

THE following operations were performed by M. Graëfe, at Berlin, in the year 1833:—

Case 1. A young man, twenty-two years of age, had a tumour the size of a goose's egg in the anterior and middle part of the neck, which occasioned extreme difficulty of deglutition and respiration. These symptoms, so little in accordance with the small size of the tumour, rendered it probable that the latter adhered closely to the anterior part of the larynx and trachea, which circumstance M. Graëfe was careful to keep in view during the operation. An incision was made through the skin, commencing a finger's breadth above the superior margin of the thyroid cartilage, and extending down the median line of the neck to the top of the sternum. The subcutaneous and sternomastoid muscles were then drawn to the right and left, which exposed the tumour, presenting a shining aspect. The surrounding parts were detached with the finger, and a bistoury, and some arteries were tied. The tumour was now found to adhere closely to the larynx and trachea, without the intervention of any cellular substance. The excision of the goitre was performed with the greatest caution by small strokes of the knife, and the portion of it which adhered to the air tube was not removed. Only eight arteries were tied during the operation. The wound was filled with lint—union by the first intention being avoided, in order that the still adherent part of the tumour might be discharged by suppuration, which accordingly took place. The lips of the wound were afterwards placed in accurate apposition, and the cure was complete at the end of six weeks.

Case 2.—A young woman, twenty-five years of age, of a delicate constitution, had been affected from her infancy with a goitre which was divided into three very distinct lobules. The immense size of the tumour precluded its entire removal at one operation; it was therefore determined to begin with the middle lobule, which was the largest, and appeared to be the nucleus of the morbid growth. The operation was conducted as in the preceding case, except that the tumour being attached to the larynx and trachea only by loose cellular tissue, there was no necessity for leaving any part of it adherent. The wound was united by adhesive straps, and was entirely cicatrized in six weeks. The lateral lobes, instead of enlarging, as there was reason to fear, diminished considerably, confirming the opinion of M. Graëfe, that the middle lobe formed the nucleus of the tumour. Perhaps, also, the inflammation consequent on the operation, and the obliteration of the vessels that were tied, contributed to the absorption of the remaining lobules.—*Gazette Médicale.*

Diabetes Mellitus.

—Josia, aged twenty-nine years, was seized in the summer of 1834 with extreme thirst, which he allayed by drinking large quantities of cold water. A few days after, he observed a great augmentation in the excretion of urine. Both these symptoms rapidly increased, accompanied with loss of strength and emaciation. When his thirst was greatest, he drank six decanters of water in the twenty-four hours, and passed a proportionally large quantity of urine. Shortly after he was admitted at La Charité, complaining of pain in the epigastrium, accompanied with vomiting, of which symptoms he was relieved by cupping in the epigastrium, and left the hospital still labouring under diabetes. In a few days an increase of the diabetic symptoms, now accompanied with cramps in the legs, and oedema of the lower extremities, induced him to enter the Hôpital St. Antoine, under M. Malet, on the 21st October, 1834, five months after the first accession of the disease. At this time he passed daily nine quarts of urine, while he never drank more than six quarts of fluid. He was free from fever, but much emaciated; had very little pain in the epigastrium, but much thirst and burning heat in the mouth; occasional, and very slight lancinating pains in the region of the left kidney; skin constantly dry. The nocturnal sweats, an aphrodisia, peculiar swelling of the gums, and affections of the alimentary canal, which some recent observations have coupled with diabetes mellitus, were entirely absent in this case; the symptoms alluded to, however, have been remarked only in cases of much longer standing than that here described. The urine was subjected to a careful analysis by M. Mialhe, chief pharmacien to the hospital. It was found to contain a smaller proportion of urea and uric acid than healthy urine—phosphates of lime and magnesia—sub-phosphate of lime—alkaline sulphates and muriates—caseous matter—a trace of fibrine, and no albumen. The residue of evaporation, treated with boiling alcohol, gave 31 grammes of saccharine matter in 500, which, divested of impurities, precisely resembled grape sugar, as observed also by Nicolas, Gueudeville, Thénard, and Dupuytren. This analysis is opposed to the opinion that the entire absence of urea in the urine is an essential feature of the disease. The case was at first treated by M. Mialhe according to the views of M. Dézelmeris, with repeated applications of leeches to the epigastrium and anus—vapour baths—and ptisan in very moderate quantity. No benefit, however, was derived but a temporary diminution of thirst, and abolition of the slight pains in the epigastrium; this treatment was therefore abandoned in favour of an azotized regimen, and the patient was allowed two pounds of fresh pork daily, with bread and wine,

six pounds of iced water, and ptisan at discretion. The baths were continued from time to time. Under this regimen all the symptoms diminished, and the urine was reduced to three quarts, with a progressive decrease of saccharine matter, and augmentation of urea. In accordance with the observations of M. Thénard, the urine presented no trace of albumen, while the urea was increasing and the saccharine matter diminishing. After a decided amelioration of the symptoms had taken place, beef was substituted for a portion of the pork, as the patient had become disgusted with so fat a diet. On the 6th of December, about thirty days from the commencement of the azotized regimen, Josia left the hospital free of all bad symptoms except the imperspirable state of the skin, which had existed during his whole life. This case, communicated by M. Fournet, being of some interest, but too long in the original to be extracted entire, is here abridged from the Archives Générales Férierien.

Hospital Reports.

ST. GEORGE'S HOSPITAL.

Rhinoplastic Operation.

March 26th. At pages 25 and 125 of our present volume, will be found a report of the case of deficient nose, in which Mr. Keate performed the rhinoplastic operation, and which, at the period of last report, appeared likely to terminate in every respect favourably. These anticipations, however, were not altogether verified, partial success having only attended it. The flap of skin, which, our readers will recollect, was taken from the forehead, had united partially all round, but the union between it and the surrounding skin has only been permanent at its superior and inferior borders; the adhesions on each side, and more particularly on the right side, where it encroached almost on the conjunctiva, having given way. This unfavourable result appears partly to be owing to the two following causes:—

First. The flap being somewhat broader than requisite; and secondly, to the difference in the texture of the opposed surfaces of the skin on the right side; the one consisting of the skin taken from the forehead, and the other of the delicate dermis of the palpebræ and their internal commissure. The man was brought into the theatre to-day, to have these defects partially remedied. Mr. Keate restricted himself, on this occasion, to paring the edges of the left side of the flap and the corresponding margin of skin, and bringing them together with five or six stitches of interrupted suture. In refreshing the edges of the flap, the circulation in it was found to be quite re-established, and there is no doubt as to adhesion taking

place on this side. Mr. Keate, however, candidly confessed that he felt quite at a loss as to what could be devised for the opposite side, where the difficulties which we have alluded to exist, and said he should be most happy to receive the suggestions of any of the gentlemen upon the subject.

WESTMINSTER HOSPITAL.

Subcutaneous erectile Tumours—Operation, Consecutive Erysipelas.

FREDERICK CONKWEILL, aged 8 years, was born with several small tumours on the right arm, hand, and fingers. During the past few months, these have considerably increased in size, and have excited the apprehensions of his friends, who have brought him to the hospital to see whether they could be removed by an operation. Mr. W. B. Lynn, to whose lot the patient fell, consulted with the other surgeons respecting him. Sir Anthony Carlisle was of opinion that they were fatty tumours, and rather discouraged any operation being performed. Mr. Guthrie and Mr. White, however, agreed with Mr. Lynn in considering them as nævi, or, as Mr. Lynn denominated them, placenta tumours, from their tissue consisting, in his opinion, of a congeries or plexus of vessels. It was agreed that the largest of the tumours should be removed first, before anything was done with the more numerous smaller ones. The large tumour, which is to be removed, is situated on the ulnar side of the lower half of the fore arm, and is about the size of a hen's egg, having an elongated prolongation of its substance inferiorly extending nearly to the wrist. Another, on the back of the hand, is only about a fourth of the size, and three or four of still smaller dimensions exists on the back of the ring and little fingers. In one respect, these tumours do not agree in character with ordinary subcutaneous erectile tumours, which is, that they do not exhibit any vascular appearance through their integument. Singularly enough, however, the skin covering the tumour on the back of the hand is discoloured, apparently from the development, to a trifling extent, of the erectile tissue in the substance of the corium, in this situation.

February 7th. Mr. Lynn proceeded, to-day, to remove the large tumour from the arm; which he did by making two semi-lunar incisions, so as to leave an elliptical piece of skin, of rather considerable size, over the tumour. A little blood was lost from several small vessels, which were divided in separating it from the subjacent fascia, a considerable surface of which was exposed. The wound was dressed in the ordinary manner, with adhesive straps, &c., and the boy was removed to a bed in Percy ward.

Upon making a section of the tumour after its removal, it was seen to be evidently consisting of accidental erectile tissue, with which, however, a good deal of adipose tissue was intermixed, and which was so empty of blood, that it might be said to be in a state of comparative anæmia, which would appear to support an idea expressed by Mr. Guthrie, that "the tumours were undergoing a spontaneous cure."

14th. A few days after the operation was performed, a rather excessive degree of inflammation set in, in the wound, which has suppurated: it however appears to be now lessened, and the wound to be filling up with granulations.

17th. Erysipelatous inflammation has spread up the arm, in the course of the absorbents, and is apparently venting its force in the formation of matter in the axilla. Rather severe constitutional disturbance has been excited; pulse is 120, and feeble; skin hot; tongue covered with a whitish fur; countenance anxious, depressed, and flushed. He is taking anti-febrile remedies.

21st. The general symptoms are much relieved since last report; there is free sup-puration from the wound in the arm, which looks much less irritable: the tumefaction and redness in the axilla still remain, but no distinct fluctuation can be distinguished.

23rd. The wound in the arm is now rapidly filling up with granulations, which have a healthy character. The tumefaction, &c., in the axilla still continue; almost all the symptoms of irritative fever have disappeared, and the boy's general health is fast improving.

26th. Considerably better; the inflammation in the axilla is subsiding, without the formation of any abscess; the wound in the fore-arm, occasioned by the removal of the tumour, is rapidly healing, and the boy has now nearly recovered his usual health.

27th. Same as last report. It is now observed that the tumours on the back of the hand and fingers have considerably diminished in size, whilst he has been the subject of the illness consequent to the removal of the large tumour, and its necessary concomitants of low diet, &c. Most probably, however, this arises merely from the absorption of the fat which was found to constitute a considerable portion of the elements of the large tumour which was removed, and that the proper erectile tissue itself remains unaffected.

March 4th. Better, the wound in the arm is about cicatrizing; the tumours on the hand are, I think, hardly so small as at last report.

14th. He is rapidly getting well, the tumour in the axilla has now disappeared without matter forming; the wound in the fore-arm has nearly cicatrized, and his general health is quite established. Mr. Lynn has directed straps of adhesive plaster to be bound tightly around the fingers, with the view of exciting, by means of pressure, the absorption of the tissue of which tumours there situate are composed; and which, as before stated, are somewhat less than before the operation.

21st. The absorption of the tumours does not appear to advance, but, on the contrary, they rather appear to enlarge as the boy's health improves, and in addition, a fresh tumour has begun to form on the back of the hand, close by one of the others, and in the angle between the ring and the little finger, which occasions the patient a little pain.

LITERARY INTELLIGENCE.

In the press, and just ready for publication, "Magendie's Formulary for the Preparation of several New Remedies." Translated, with additional articles, by Dr. Gully

WEEKLY METEOROLOGICAL JOURNAL.

1835.	Moon.	Thermom.			Barometer.		De Luc's Hygrometer		Winds.		Atmospheric Variations.		
Mar.													
26		37	48	37	30.22	30.10	53	54	W.N.W.	N.N.W.	Fine	Fine	Fine
27		43	51	40	30.06	30.04	55	53	N.	N.N.E.	—	—	—
28		41	45	35	29.97	29.90	54	53	N.E.	N.N.E.	—	—	—
29	☉	42	46	35	29.85	29.81	53	50	E.N.E.	N.E.	—	—	—
30		36	50	36	29.63	29.57	50	51	E.N.E.	S.	Cloudy	—	—
31		44	54	43	29.55	29.50	50	61	S.	S.S.W.	Fine	Rain	Rain
Apr. 1		53	62	52	29.71	29.70	61	51	S.S.W.	S.S.E.	—	Fine	Fine

The quantity of Rain fallen in March, 2 inches.

50, High Holborn.

WILLIAM HARRIS and Co.

All communications and books for review are to be addressed (post paid) to Dr. Ryan, 4, Great Queen-street, St. James's Park, Westminster; or to G. Henderson, 2, Old Bailey, Ludgate-hill.

THE

London Medical and Surgical Journal.

No. 167.

SATURDAY, APRIL 11, 1835.

VOL. VII.

LECTURES

ON

MEDICAL JURISPRUDENCE,

DELIVERED BY PROFESSOR A. T. THOMSON,
F. L. S.,

At the University of London; Session 1834-35.

LECTURE XXIV.

GENTLEMEN—The division of our subject upon which we are now about to enter is one of the utmost importance, embracing questions, in which medical testimony is required, connected with personal safety and life.

Happily in this, and many other countries, no death can happen, which is not the result of obvious ill health or disease, without an investigation of the circumstances which have led to it. In some instances the facts are so clear that no medical opinion can be required; but, in many cases, this cannot be dispensed with; and, not unfrequently, on the medical evidence alone depends the life of an individual: the responsibility, therefore, is too great to be undertaken without an accurate examination into every circumstance which can have affected the issue.

It would be impossible, in the period of time allotted for this course of lectures, to inquire into every cause of death demanding a legal investigation: those which commonly occur are, therefore, selected; and, from the mode in which decisions are arrived at in these, some idea may be formed of what may be requisite in others. The first subject under this head in your syllabus refers to *injuries* and *mutilations*.

Although I have used the term *injuries*, yet the legal phrase is *wounds*, under which are comprehended not only *incised* and *punctured* wounds, and *gun-shot* wounds, but, also, *bruises* and *lacerations*. In the ordinary phraseology of society, wounds are *slight*, *dangerous*, or *mortal*; but the event of any wound, except those which may be classed under the last head, *mortal*, depends so much on *position* and *circumstances*, that it is impossible to adhere to such an arrangement. No one would hesitate to regard an abrasion of the skin of the leg as a slight wound, yet

in certain states of the habit this may prove mortal—as was illustrated in the case of the learned Jacob Bryant, who bruised his shin against a chair, in the act of reaching a book from a shelf, and died of mortification of the limb, the sequel of this trifling injury. On the other hand, wounds which are apparently of the most formidable description may, nevertheless, terminate favourably, contrary to all expectation. In 1712, a case was published by Mr. William Maiden, of complete recovery after the shaft of a chaise had been forced through the thorax; the late Dr. Monro, in his anatomical lectures, used to mention an instance of recovery after a red hot poker had passed through the lungs; and Dr. Male, mentioning the possibility of persons recovering whose brains have been wounded to a considerable depth, tells a story of a pauper in Paris, who used to receive charity in a piece of his skull. It would be easy to multiply such instances, but enough has been said to shew the difficulty of delivering a correct opinion on the nature of injuries, before the event occurs; and, after that, in tracing the death of the individual to the injury which he has received. In this country, however, the criminality and the punishment do not always depend on the fatal issue of a wound; for by an act of the legislature, usually termed Lord Ellenborough's act, the infliction of a wound with intent to kill is deemed felony, although death may not be the result. (See Russell, p. 594—and, for the alteration of the statute, xvi). But frequently this evil intent can only be inferred or disproved by the nature of the injury; and consequently the evidence of the surgeon, or medical man, is still of much importance; and, on giving an opinion, it behoves the medical witness not merely to inspect the wound, and discover its nature, direction, and connexion with internal lesions which may be found on dissection, but to take into account the influence which *age*, *constitution*, *temperament*, *health*, the *vocation* of the wounded person, the *place* of his *residence*, the *weather*, the *time* at which surgical aid was procured, and the *kind* of *aid*, *skilful* or *otherwise*, would have on the issue. It is even necessary to look at the relative

strength of the wounded person, compared with other individuals of the same age; and whether any peculiarities of structure exist, which can explain the fatal event, in the particular case under examination; for death may follow very slight causes where such peculiarities exist; and nothing would be more inconsistent with justice than to punish an act which, under ordinary circumstances, would not have been regarded criminal. Thus, in a case referred to by Dr. Paris, a boy died of fracture of the skull from a chastisement inflicted upon him by a man who caught him in the act of robbing his orchard. On the trial, it was clearly proved that the size of the stick was not such as to have occasioned any fracture, had not the skull of the boy been *unusually thin*; and upon this evidence the man was acquitted of the felonious part of the charge, as no evil intent could be proved. It is evident, therefore, that a wound may prove fatal in one person, which would not be even dangerous in another; the danger, also, may depend less on the degree of severity of the wound than on the part of the body wounded, and not unfrequently on the treatment adopted. In giving evidence, therefore, in cases of death or extensive injuries from wounds, the medical man has no general rules to guide him, but each case must be examined upon its individual merits. I shall suppose a case, and point out to you the peculiarities to be attended to in its investigation.

First, with regard to *incised and punctured wounds*. Two men quarrel, and in wrestling one of them takes a knife from his pocket, or, if a soldier, a bayonet from his side, and inflicts a wound or wounds upon his opponent. In such a case, death may follow immediately, or in a few days, or life may be placed in great danger, and yet recovery take place, or no apparent danger may be obvious at the time, and nevertheless the man may apparently die of the injury he received from the wound. In the first instance, questions may be raised whether the death was the result of the wound, or the effect of the falls on the ground during the scuffle; or whether a similar wound would have proved fatal, had the individual not been under the excitement of anger at the instant of receiving it. If the wound be in the neck, and the carotid divided; or in the groin, and the femoral artery be opened; or if it have penetrated the thorax, and into the heart or the aorta; if the par vagum on either side be divided; or if the abdominal cavity be laid open, and the stomach or any of the viscera extensively wounded, and the individual die in a few minutes, the mortal characters of the wounds can leave no doubt that they are to be regarded as the cause of death; but if this be delayed for some hours, and the wounds be not very conspicuous, then the opinion respecting the cause of death becomes more difficult, and

involves several considerations. If the head be the part wounded, and the knife or the bayonet have penetrated to the bone, although the wound be scarcely perceptible, the most severe inflammation may be set up, and death be the consequence of a wound apparently slight; for a complete division of the pericranium is much less to be dreaded than a wound from a sharp pointed instrument penetrating to the bone. If the wound on the head arise from a fall, and a portion of the integuments be stripped from the bone, there is often less danger than from a punctured wound. This fact is well illustrated by a case quoted in the notes to Dr. Darwall's edition of Dr. Beek's Elements:—a drunken soldier fell from a waggon, the wheel of which, passing obliquely over his head, stripped the whole of the integuments off one side of it, leaving the bone completely bare. The integuments were replaced, and secured by stitches and bandages. The soldier travelled four days on the waggon before he was put into the hospital; and in less than a fortnight he was able to resume his duty. From these facts we are to draw this inference, that when giving evidence with regard to incised or punctured wounds of the head, we must explain to the court the uncertainty of the result in all such cases; and that no inference can be drawn from the extent of the wounds, as the largest wounds of the head are by no means the most dangerous. On the same account a cautious prognosis is to be given, even when the wound is apparently what is termed slight, as erysipelas may supervene, and, if communicated to the membranes of the brain, certainly prove the cause of death. (Case in Times.)

The same caution is required with regard to wounds of the face. The point of the knife may have entered the orbit above the eye, and penetrated to the brain, and become the cause of death, although scarcely any external wound is perceptible: on the other hand, there are instances on record, in which sharp instruments have penetrated to the brain, and yet no bad effects have followed. A remarkable case of this kind came under the care of Mr. Liston. The man to whom it occurred was blasting the roots of trees, when a splinter was driven into the eye, which, from its length, must have penetrated through the foramen opticum into the brain. Some time afterwards this splinter was removed by Mr. Liston, and the man recovered. In the same manner much obscurity may be produced if the instrument have penetrated to the brain through the nose, unless death immediately ensue, and the fact be determined by dissection. In the majority of instances, however, wounds of the face are not dangerous, and yet death may result without any other apparent cause. In such cases, a medical witness would ill perform his duty were he to confine his investigation to the wounds them-

selves: he must examine the whole of the head, first externally, to ascertain the existence of any bruises, and then internally, to see whether effusions of blood between the dura mater and the skull correspond to the external bruises, in which case the danger must be attributed to the *falls*; or, even if no external bruises be evident, and effusions of blood be found on the membranes, or in the substance of the brain, still this may arise from the shock of a very slight fall, or even from a blow, rupturing the vessels. This fact is well illustrated in a case mentioned by Mr. John Bell, in his work on Anatomy. A woman, whose child was ill, went down stairs in the dark to procure some water, and slipping on the last step, came down upon her heel. She felt no great inconvenience from the shock at the time, and returned up stairs with the water. She had, however, scarcely entered the room ere she staggered, and supported herself for a few minutes on a chest of drawers, then sunk to the ground, and instantly died. On opening the head a vessel was found ruptured, the effusion of blood from which into the substance of the brain was the immediate cause of death.

Although extensive wounds of the neck, in which the carotids, the internal jugular veins, or the pharynx, or the œsophagus are divided, such as are inflicted either by the murderer or the suicide, must always be regarded as dangerous; yet we are not to be guided, in pronouncing an opinion, solely by the extent of the injury, and the nature of the parts divided. The wound inflicted in the neck may be scarcely perceptible, or be in a place where little danger is feared, and nevertheless may prove soon fatal. Sir Charles Bell, in his Surgical Observations, mentions the case of a suicide who made six slight cuts on the fore part of the larynx, and although no considerable branch of the thyroid artery was divided, yet he bled in secret for three hours, and died of the hæmorrhage.

The prognosis of incised or punctured wounds of the thorax is always doubtful, if the instrument have entered at the upper part of the thorax, or at the posterior side near the junction of the ribs with the vertebræ: but it is the universal opinion of army surgeons, that wounds of the thorax, whether incised or punctured, ultimately do well, if the hæmorrhages be not of so deadly a nature as to prove fatal in forty-eight hours: even the heart has been slightly wounded by a sharp instrument thrust into it, without proving mortal. From these and similar facts, the medical witness is authorised to speak with more confidence of recovery from incised or punctured wounds of the thorax, than those of the head or neck. Many instances have been recorded of recoveries from apparently desperate wounds of the lungs; thence the impropriety of decidedly declaring any wound of this descrip-

tion mortal or highly dangerous; but, on the contrary, holding them up as seldom terminating fatally in a healthy state of the habit, unless some large vessel, or other primary organ besides the lungs be wounded. Wounds, however, on the surface of the thorax, which are not at all of a threatening nature at first, often unexpectedly have a fatal termination. Thus, in such a scuffle as I have imagined, if the knife or bayonet enter from behind, and directly open the infra scapular vessels, although externally very little or no hæmorrhage may appear to the eye, yet the blood may be poured out and may find its way down to the loins by infiltration, causing there deep abscesses, gangrene, and death. Hence the greater necessity of a cautious prognosis in some cases where the cavity of the thorax has not been entered, than in many in which it has been deeply penetrated.

In a case detailed in the *Times* newspaper (January 29), a man of the name of Jenkins was stabbed, and died in two days afterwards. The report of the surgeon, Mr. Jones, who attended and examined the body, is—"that the knife had passed obliquely through the integuments between the 7th and 8th ribs; the orifice on the inner side being half an inch nearer the median line than the one on the outside, and had penetrated the diaphragm, causing an effusion of blood in the cavity of the abdomen and the chest." The vessels divided should have been mentioned, although it would not alter the correctness of the opinion that the internal hæmorrhage was the cause of death. "The instrument," says Mr. Jones, "which caused the wound had been introduced obliquely from the left to the right side." This observation is a valuable one; yet, in answer to a question from a juror, "Was it likely he could have inflicted the wound himself?" Mr. Jones answers, "It might have been." Now this is not very probable, unless he were a left-handed man—an important fact, which should be ascertained before the trial.

All incised or penetrating wounds of the abdomen, whether of the containing or contained parts, require a doubtful prognosis, being always dubious in their results. More is to be dreaded from inflammation than protrusion of intestines; yet the singular recoveries that have been recorded from the severest wounds of the abdomen, should at least teach us caution in hazarding an opinion upon the result of these cases. Dr. Hennen, in his Military Surgery, mentions the recovery of a soldier, whose abdomen was penetrated by a ramrod, fired from a musket: it had passed anteriorly, and actually stuck in one of the transverse processes of the vertebræ, from which it was not disengaged without the application of some force. When the instrument has penetrated the stomach itself, it is scarcely possible to doubt that blood-vessels and nerves must be injured; thence, it cannot

be regarded otherwise than at least hazardous. If the stomach be full at the time the wound is inflicted, it is more dangerous than when the viscus is empty: it should always, therefore, be a subject of inquiry, how long before the injury a meal had been taken, as this should guide our decision. Wounds of the intestines are less hazardous than those of the stomach, unless the small intestines be penetrated: the greater risk in these seems to depend on their greater irritability, and the greater number of nerves sent to them. Fodère mentions a case where instant death was caused by a slight prick in the small intestines, from a butcher's knife, although little blood was effused. The degree of danger connected with wounds of the fixed viscera of the abdomen depends very much on the injury done to the principal vessels supplying them with blood. In females, if the uterus be wounded in the impregnated state, the danger is much increased. In every wound of the abdomen, the nature of the extravasated fluid is particularly to be taken into account: whether blood, bile, fœcal matter, chyle, or urine. With the exception of blood, which, in a certain degree, is within the power of the surgeon, the pouring out of these fluids into the abdominal cavity is always productive of danger, and of dubious result, by the inflammation which is induced by them on the serous membrane.

Little is required to be said respecting wounds of the extremities, whether incised or punctured: the danger of all wounds being lessened in the direct ratio of their being within the power of the surgeon. Simple wounds, however, even of the extremities, are not wholly free from risk: thus, a cut across the abductor muscle of the thumb may prove hazardous, from the tendency of wounds in that muscle to induce lock-jaw: and wounds of veins, in some conditions of the habit, almost invariably prove hazardous.

Such are the circumstances to be attended to in delivering a prognosis respecting incised and punctured wounds, when these are the subjects of medico-legal inquiry. The subject can only be very briefly and imperfectly sketched in this place; it involves details of surgery, which it is not my province to enter upon; but without a competent knowledge of which, no man can be regarded as a medical jurist. When wounds of this description are even slight—that is, when no parts, important in carrying on the vital functions, are involved in the injury—still, under certain circumstances, we ought not too hastily to form a decision as to the issue. A wound, apparently very slight, may not be wholly devoid of danger; and when death follows a wound at the distance of several months, it becomes an object of the first moment to determine whether death, in this case, is to be attributed to the wound, or to some cir-

cumstance connected with the habit or condition of the person, or the management of the wound. Sir Charles Bell has recorded a case of this kind, although the wound was inflicted by the person herself. "A young woman, in phrenzy, plunged a pen-knife into her throat. The point of the knife pierced the upper part of the thyroid cartilage, so that it entered at the union of the chordæ vocales. She was suffocated at the distance of some months, by the granulations which arose from the edge of the wound, and which filled up the passage of the glottis. The patient in the meantime had gone about her usual occupations." In another case, which also survived some months, the man at length died of suffocation, produced by the knife, with which he cut his throat, having so divided one of the arytenoid cartilages, that a portion hung by a membrane, so as to vibrate in the chink of the glottis, like a pea in a cat-call, and acting as a foreign body, caught in the rim of the glottis, and occasioned suffocation. In both of these cases, had the wounds been inflicted by other hands than those of the individuals themselves, charges of murder would have been properly made against the parties, and would have evolved an argument of high legal interest.

If, instead of *incision* or *puncture*, the wounds be *bruises* or *contusions*, the same precautions in finding a prognosis are requisite. They are more obvious than incised or punctured wounds, from the discoloration of the part, arising from the violence of the injury which it has sustained, producing an effusion of blood. But the results of severe mechanical shocks are not always so conspicuously traced. A blow on the region of the stomach will frequently produce death: no appearance of change or bruise is seen on the surface, but the stomach, when examined, displays a red, inflamed appearance, which has been attributed to the sudden cessation of the action of the heart producing the settling of the blood in the extreme arterial branches; sometimes they are accompanied by laceration, in which case they are attended with hæmorrhage. In some instances, the blow which causes death is so trifling, that it is difficult to fix the degree of guilt that should be attributed to the aggressor. Two cases of this description are noticed by Dr. Paris, which I will read to you. (See vol. ii, pp. 122, 123).

In lacerated wounds the hazard is generally in proportion to the extent of the exposure of the denuded surface to the air, and the risk, which not unfrequently attends them, of tetanus supervening.

With regard to gun-shot wounds, the chief object, in medico-legal inquiries, is to ascertain the course of the ball, both in determining the degree of danger, and the fact as to the direction in which the shot was

fired; on which, in numerous instances, guilt has been brought home to the accused; and in some cases the innocent, who would otherwise have been unjustly condemned, have been fully and satisfactorily exculpated.

The course which balls take is most remarkable. "A ball," says Dr. Hennen, "will often strike the thorax or abdomen, and, to an inexperienced eye, will appear to have passed directly across, or to be lodged in one of the cavities:"—yet, perhaps, we shall find that it has coursed along under the integuments; and sometimes, after having nearly completed the circuit of the body, is found close to the point of entrance. Dr. Hennen illustrates this remark by a very singular instance, which occurred to a friend of his in the Mediterranean. "The ball, which struck about the pomum Adami, was found lying in the very orifice of its entrance, having gone completely round the neck." This circuitous course of balls occurs even in cases of suicide, when the pistol is placed close to the body.

Many years ago, I was desired to see a gentleman who had shot himself. I hurried to the house, and found the person lying on his bed-room floor, with his servant supporting him, and a pistol close to him. He was pale, trembling, and apparently dying; and he assured me that all assistance on my part was vain, as he had shot himself through the heart. He was raised upon his bed and stripped: he breathed freely: very little blood was upon the shirt, none was expectorated, and none at the point where the ball had entered, which was over the sixth rib. I therefore suspected that it had not entered the thorax, but had struck the rib and coursed round it, which, on examination, proved to be the case, as I found it under the scapula, near the lower edge of the bone. That bone was fractured, and, therefore, I had little difficulty in extracting the ball. I need scarcely add, the gentleman recovered: he is now alive, and in possession of a title and a large property.

The most singular instance mentioned by Dr. Hennen, is one in which a ball, which struck the breast, lodged in the scrotum, the man standing erect in the ranks. Nothing is of more importance than a knowledge of these facts, in a medico-legal point of view. A man is shot, the ball is said to have passed through the thorax, and he is reported to be in the most imminent danger; yet he displays no great difficulty of breathing; there is no hæmorrhage from the mouth; no deadly faintness, nor coldness of extremities, nor labouring pulse, has taken place. In such a case, there is every reason to believe that the thorax has not been penetrated. Sometimes its course may be traced by a peculiar dusky line, terminated by a tumour, where the ball is lodged; but this line is not always obvious. The direction which a ball takes is often the best evidence whether in-

tention or accident occasioned the shot. In a trial for shooting a poacher, it was satisfactorily proved that the direction of the ball being upwards, the fowling-piece had not been levelled from the shoulder, which would have implied an intent to kill, but must have been discharged at the trail, and consequently the wound which caused death must have been accidental. This evidence, which was given by the surgeon who examined the wound, was sufficient to convince the jury, who brought in a verdict of *chance-medley*, and the panel, Richard Annesley, was accordingly discharged.

Enough has been said to convince you, Gentlemen, of the importance of an accurate inquiry into every circumstance connected with wounds, before pronouncing any opinion either on the degree of danger connected with them, or whether they have been actually the cause of death. In the event of a fatal issue, the inspection of the body should take place as soon as possible; and no morbid dissection requires to be conducted with so much delicacy and care, as that which is intended to establish a connexion between an external lesion and an internal injury, with which it may be complicated. In proceeding to the inspection, if the death have proceeded from a shot, the first object is to ascertain the place where the ball entered, and its direction; or, if the death have not proceeded from fire arms, to examine carefully the more superficial lesions, as these are likely to be either effused or changed in character as the decomposition of the body advances. It is of little consequence in what part of the body the wound might have been inflicted: every cavity ought to be examined. In considering the particulars to be attended to in such a dissection, I will not occupy your time with any useless details.

If death have been the consequence of a scuffle, or if blows on the head have been given, the first object, after the integuments of the head have been turned back, is to ascertain that there is no fracture, and whether there be any diseased state of the bones. If any appearance of fracture display itself, it must be determined whether this may not have occurred after death, which will appear by the blood not being coagulated round the fissures, nor upon the bone. On raising the skull-cap, its inner surface must be carefully examined, to see that it is not in a state of caries, or whether there be any exostoses. In a trial at the Devon Assizes, in 1800, Thomas Bowerman was accused of murdering Mary Gallop, a bastard child of his wife, by pushing an awl into her skull. The head was examined, and a small hole was said to be discovered on the side of the head near the ear, which had been pointed out as the spot by the mother of the child. Mr. Sheldon, the anatomist, who, fortunately for the accused, happened to be at Exeter at the time, demonstrated to

the coroner and the grand jury, that this was a natural perforation, with a smooth polished edge, not uncommon in skulls. On this testimony, the grand jury returned "No bill." If coagulated blood be found on the surface of the *dura mater*, it indicates external violence, although it be not opposite to the place where a bruise appears on the integuments. Sometimes it is on the hemisphere opposite to the side on which the blow was struck, forming what the French term *contre coup*. The state of the *dura mater* itself must next be carefully examined, to see whether it contain an osseous deposit, or exhibit any diseased alteration of texture, as these may occasion rupture of vessels, which would not follow a fall or slight blow in a healthy state of the membrane. The transparency and regularity of surface of the arachnoid coat must be noted, and whether any fluid be effused under it. It is of some importance to distinguish between that gorged state of the arteries of the *pia mater* which indicates that inflammation had existed there, and the turgid state of its veins, which not unfrequently occurs in cases of impeded cerebral circulation: nor must the gravitation of the blood, according to the position in which the body has been lying, be mistaken for congestion.

In cases of sudden death, in a state of health, the ventricles of the brain contain no fluid, except as much as merely serves to lubricate them; if any protracted disease have existed previous to death, more or less fluid is generally found in them. Too much care cannot be bestowed on the inspection of the brain, its consistence, the state of its vessels, and whether it be devoid of abscesses, tumours, extravasated blood, or hydatids: for if these exist, very trivial blows may be productive of fatal effects. On removing the brain, the base of the cranium must be carefully examined, as fractures may exist there, which might escape notice. (See illustration in a curious case published by Sir C. Bell, Obs. p. 469). This case shows, also, the necessity of examining the cervical vertebrae: for although dislocation of these cannot occur without displaying symptoms which indicate it during life, yet fractures may exist, which tend to throw light on the subject of inquiry.

In opening the thorax, the greatest care must be taken to avoid puncturing the pleura, or the pericardium. Our first object is to ascertain if fluid be contained in the chest, and whether this be limpid, tur-

bid, or flaky; next, the colour, general appearance, and capacity of the lungs must be ascertained; whether they are gorged with blood; crepitous and light, or dense, and sink in water. Violet-coloured spots on the surface, and ecchymosis, are indicative of some violent effort preceding death. The heart should be examined both in situ and out of the body, first securing the blood-vessels with ligatures. The quantity of blood contained in its cavities; the colour of the fluids and liquidity, or coagulation, should be noted; and the state of the valves. From ossification of the latter, the life of an individual is placed in great jeopardy, and instant death may follow even a moderate effort; and the same may be the case in ossification of the aorta: so that a man in wrestling may drop down dead, without any blow or injury from his opponent.

The examination of the abdominal cavity is of great importance in cases of death from wounds. Any perforations in the stomach must be particularly investigated, to determine whether they are the results of punctured or incised wounds, or of the causes which produce spontaneous perforations of this viscus. The state of the villous coat must be fully understood, lest colouring from ingesta be confounded with signs of inflammation. No part of the intestinal canal should be overlooked; and you should bear in recollection that the death of an English sovereign, Edward the Second, was caused by a hot poker thrust up the rectum. The division of any of the lobes of the liver must not hastily be referred to wounds of a cutting instrument, for cases of falls are recorded, in which this has occurred. In one of these, detailed in the 3rd vol. of the Trans. of the College of Physicians, the right lobe was divided in an oblique direction, through its whole substance, from its extremity on the right side to the border of the left lobe.

Such is the manner of examining a body of a person suspected to have been murdered, or whose death has been the effect of wounds. No opinion from the appearances should be hastily given: and a variety of considerations are necessary to be taken into account in determining the extent of blame which can be attached to the accused, even when the post mortem examination of the body seems to bear out the truth of the accusation.

LECTURES ON THE INSTITUTIONS OF MEDICINE,

DELIVERED BY JOHN FLETCHER, M.D., F.R.C.S.E., AT THE ARGYLE SQUARE SCHOOL OF
MEDICINE, EDINBURGH; SESSION 1834-35.

LECTURE XVII.

Question of the Seat of Irritability—whether in the Fluids or in the Solids—(continued).

THE principal arguments adduced in favour—not of the inherent life, for that implies an absurdity—but of the inherent vitality of these fluids, or their competency, upon the application of the requisite stimuli, to manifest vital phenomena are, 1. That these fluids are as essentially a constituent part of organized beings as the solids, and therefore may be *a priori* regarded as equally possessed of vitality. 2. That it is of one or other of these fluids that all the organized tissues are directly composed, and that what imparts vitality to other things cannot be supposed to be itself destitute of it. 3. That these fluids have the same ultimate globular structure as the organized tissues, such globules being every where presumed to be organic molecules, and as such possessed of *l'aptitude à vivre*, or vitality. 4. That the chemical composition of these fluids is similar to that of the organized tissues, and that they resist, like the latter, during the continuance of their vitality, the influence of common chemical agents, as manifested by their remaining fluid in spite of their fibrin, and by their not undergoing putrefaction. 5. That they evince sensible motion, as actuated by their own proper stimuli, without deriving any part of this motion from the action of the solid parts, as is obvious from the facts that in some of the lower animals there are no containing vessels, that in all embryos and new growths the vessels are formed subsequently to their future contents, that these fluids continue to be circulated in cases in which, from monstrosity or disease, the action of such vessels must have been impossible, and lastly, that such inherent motions may, under favourable circumstances, be observed in them after removal from the body (*a*). 6. That these fluids display phenomena from the action of certain stimuli, such as the venom of the viper (*b*), analogous to those displayed by the solid parts, and dependent in the latter certainly upon their vitality. 7. That, under the ordinary circumstances of death, they coagulate upon the same principle as the muscles become stiff, by their vital contractions excited by “the stimulus of death,” whereas when an animal has been killed by violent exercise, or any of the other causes of sudden death elsewhere enumerated, they fail to coagulate for the same reason as the muscles, under these circumstances, fail to stiffen. 8. That even after coagulation, they actually betray, like the organized tissues, when acted upon by certain stimuli, sensible vital contractions (*c*). 9. That if they have been once frozen—that is to say deprived of their vitality—like an egg or any other organized substance which has been treated in the same way, they more rapidly undergo this process upon being again exposed to the requisite degree of cold, than they did the first time.

Now to the first of these arguments it may be replied that it is no more applicable to the fluids under consideration than to the various secreted fluids, few or none of which, except the genital fluids—the fallacy respecting which has been already alluded to—have been commonly presumed to be possessed of vitality (*d*). To the second, that it is not of any one of these, fluids nor of any pre-existing ingredient in them, that the organized tissues are directly composed, but of a proper secreted matter, or organized germ, in forming which, in all probability, these fluids did not act as instruments, but were merely acted on as materials; and that it is in virtue of its organism alone, and not in virtue of any thing derived from them, that this new matter possesses vitality (*e*). To the third, that the

(a) Heidmann, Reil's Archiv., b. vi, sect. 417; Treviranus, Biologie, b. iv, sect. 657.

(b) Fontana, Sur le Vénin de la Vipère, tom. i, p. 318, &c.

(c) Tourdes and Circaud.

(d) Albinus indeed, and some few others, have attributed life to all the fluids of the body, the excrement inclusive; and the advocates of the doctrine of the identity of the globules of extractive, sodo-albumen, and the other reputed proximate principles of organized beings and organic molecules, must necessarily concede to them all, if not

life, certainly vitality.

(e) The practice hitherto so common, not only with chemists, who might have been excused, but with physiologists, of speaking of the serum of dropsies, the lymph of adhesions, the callus of bone, and so forth, as merely *ready-made ingredients* of the blood, which, under certain circumstances, are effused, and the two latter of which are afterwards inspissated by coagulation, instead of regarding them as perfectly *new matters*, which, under certain circumstances, are secreted, and the two latter of which are aft

globules alluded to, while they are found in many secreted fluids, of the vitality of which no suspicion has been usually entertained, have never been detected in the organized tissues—admitting that they exist in them at all—till they have lost their vitality, so that their presence in the fluids in question is rather unfavourable than the reverse to the presumption of their possessing vitality—that such globules moreover are not organic molecules has been already sufficiently insisted on. To the fourth, that if these fluids have the same chemical composition as the organized tissues, they in all probability contain no ready-made fibrin, so that their not coagulating, while in the course of circulation, is no proof of their resistance of ordinary chemical agents, since they can have no more tendency to do so than the still organized muscular tissue; nor is the presumption of any such resistance on the part of these fluids, founded upon their either not coagulating, or not putrefying, while in the course of circulation, at all necessary, even admitting them to contain fibrin, sodo-albumen, and so forth—as we must do if we deny them vitality—since the fibrin, as before remarked, is never, under these circumstances, for a sufficiently long time identical to allow its property of spontaneously coagulating to manifest itself, nor, *à fortiori*, is either this or any other proximate principle of these fluids ever sufficiently long the same to admit in them of the putrefactive process. To the fifth, that these fluids, although in quite the lowest animals, in the early embryo, and in new growths, not contained in obvious vessels, may still owe what little motion they display to the surrounding solid parts, and that there is certainly no proper circulation of these fluids till a distinct vascular system has been established, which moreover may in many cases exist although not yet discovered (a); that in all recorded cases of monstrosity or disease the continuance of the circulation may be satisfactorily explained upon the presumption of certain parts of the vascular system having become vicarious of others; and that all the appearances of spontaneous motion in these fluids, when withdrawn from the body, may be fairly referred, like the shooting of a crystal from its solution, to processes preliminary to their coagulation or other physical changes, particularly as very similar motions have been noticed in numerous other fluids besides those under consideration. To the sixth, that the phenomena manifested by these fluids on the application to them of certain agents consist principally in their coagulation, which is not a vital, but a strictly chemical process. To the seventh, that as the stiffening of the muscles, in cases of death under ordinary circumstances, pretty certainly depends, as has been elsewhere shown, on a strictly chemical process supervening upon the cessation of their vitality, the analogous action of the blood is rather hostile than favourable to the notion of its being possessed of this property; and that the continued fluidity of the blood and flaccidity of the muscles, in cases of sudden death, are explicable also on purely chemical principles can hardly be questioned. To the eighth, that the assertion that these fluids are capable of effecting vital contractions after coagulation is not only false, but absurd, since it would go to prove, not only that they were alive, but that they were alive after they were dead, their coagulation, be it remembered, having been already attributed to the stimulus of death. Lastly, to the ninth, that the more rapid freezing of these fluids the second time than the first may be easily explained upon the presumption of numerous physical changes which they may in the meantime have undergone, without having recourse to any changes resulting from a loss of vitality.

It seems then that all the commonly alleged arguments in favour of the inherent vitality of all or any one of these fluids are more or less fallacious, and consequently that they may be safely regarded as destitute of this property—the more especially as the presumption of their vitality appears to be as totally uncalled for as that of any of the other fluids of the body. It is with the heart alone, or corresponding organ, and its immediate appendages, the arteries, veins, and lymphiferous and chyliferous vessels, with the parenchymatous and erectile tissues, that these fluids, all or any of them, come into contact. Now, the heart or corresponding organ, as the centre of the circulating system, and parenchymatous tissue, as the seat of nutrition, secretion, and absorption, are as certainly muscular, and therefore as capable of acting on their contents, as the parietes of the chest, the stomach and intestines or the uterus; and it is manifestly inconsistent to believe that in the former cases the organs require the co-operation of their contents in order to perform their functions, while in the latter they do not.

We appear to be justified then in concluding from all that has preceded, that irritability, or vitality, the primary condition of life, and the predisposing cause, as it were, of

wards solidified by their plastic force, is happily losing ground. It is impossible that any precision can be maintained in the science of physiology, so long as processes and substances so totally unlike each other as the effusion of coagulable lymph, and the secretion of an organized germ continue to be called by the same names.

(a) How recently, for example, has the beautiful vascular system of insects been satisfactorily demonstrated; and how probable is it that a Newport or an Ehrenberg will in future detect distinct vessels in forms of being which appear hitherto to be utterly destitute of them.

all the functions in the sum of which life consists, resides exclusively in the organized solids; and that it is by the action of these alone that all the vital movements, whether molecular or sensible, are effected (a). Further, it is manifest from the endless modifications of the vital movements, not only of different organized beings, but of the different organized solids of each, as excited by the same stimuli applied either to different plants and animals, or to different parts of the same, that every organized solid is not only the seat

(a) Among those who, like almost all the ancient physiologists, as well as so many of the modern, looked upon life as something elementary, and, as it were, ready-made, it was not possible that irritability or vitality, an ingredient only, if it may be so called, of life, and requiring to be compounded with others before it can give rise to vital phenomena, could attract any attention; nor can it be said that their *Πορ καθαρσιον κ. τ. λ.* was synonymous with what has been since called irritability, when it is remembered that the former was regarded as a substance, the self-sufficient cause of living action, while the latter is considered as merely a property, and one condition only of such action. The term irritability was used for the first time by Glisson, about the middle of the seventeenth century; and is by him defined to signify the faculty of perceiving a stimulus, in contradistinction to sensibility, which is defined to signify the faculty of perceiving a perception. "Irritatio," says Glisson, "est Perceptio, sed Sensatio est Perceptio perceptionis" (*De Ventriculo et Intestinis*, 1678, p. 239)—a definition which for either terseness or accuracy cannot perhaps be improved. In the same track, and equally with reference principally to the irritability of man and the higher classes in general of organized beings—in which alone there is any occasion for contrasting it with sensibility—followed Baglivi (*De Fibra Motrice*, &c. 1703)—De Gorter (*Medicinæ Compendium*, 1731)—Winter (*De Certitudine in Med. Prac.* 1746)—Lups (*De Irritabilitate*, 1748)—F. Hoffman (*Med. Rat. Syst.* 1750)—and many others; but the laws of irritability were investigated with so much more care and precision by Haller and his pupil Zimmermann (*De Irritabilitate*, 1751), that the labours of all preceding physiologists became obscured, and the whole doctrine of irritability has been since inseparably connected with the name of Haller. It must be remembered however that the irritability of Haller—or, as he sometimes called it, *Vis Insita*—was not precisely that of most of his predecessors; the latter having commonly used the term in the general sense above adopted, while by the former it was confined to the susceptibility of movement in the more obvious muscles—the sensible contractility afterwards of Bichat—the laws of which alone could easily be made the subject of investigation. By Brown (*El. Medicinæ*, 1780), the faculty of irritability, in the most extended sense of the word, was in general amalgamated with every other analogous faculty, including

sensibility, under the general term excitability; but it was again distinguished by Girtanner, (*Sur l'Irritabilité*, 1790)—who once more employed the term, not in the restricted sense of Haller, but in the comprehensive sense in which it had been employed by Glisson, and while he conceded more or less of this faculty to all the organized solids as well as to the more obvious muscles, regarded like some others the *Vis Insita* of Haller, or that faculty by which these organs contract upon the application of stimulus to themselves, as only one of several kinds of susceptibility of which they were possessed, such as a *Vis Tonica*, a *Vis Nervosa* and a *Vis Animalis*, or distinct faculties of contracting either upon being mechanically distended, upon the application of a stimulus to their principal nerves, or as acted upon by volition. Concerning the whole of this doctrine however, it is sufficient to observe, once for all, first, that these so-called *Vires* are not *Vires* or powers at all, in the physiological sense of the word, but properties or faculties; and secondly, that, as resident in the same organ, they are no more distinct from each other than the property by which the stomach acknowledges the stimulus of various kinds of ingesta, and that we might with equal propriety attribute to the latter a *vis panaria*, a *vis casea*, and a *vis carnea*, because it acts equally well on bread and cheese, and on beef-steaks. By Blumenbach (*Instit. Physiol.* 1786), as by Haller, the term irritability is restricted to the susceptibility of movement in the more obvious muscles, which is otherwise called by him *Vis Muscularis*; while that in the insensible muscles or parenchyma—the Tonicity of Stahl, Whytt, and Cullen, and the Insensible Contractility of Bichat—he calls simply Contractility or *Vis Cellulosa*. With Chaussier again (*Exposition*, &c. 1807), the term irritability includes the susceptibility of movement, not only in the obvious muscles, but in the insensible muscles or parenchyma likewise, the former of which, however, he characterizes by the specific appellation of *Myotility*, and the latter, like Blumenbach, by that of Contractility properly so called. But there is no end to the different meanings attached to the word irritability by different physiologists, to say nothing of pathologists, who, from the time of Gaubius, have added to the confusion by continually using the word in a morbid sense, or of moralists, who apply the same term to a certain state of the temper and disposition. There seems to be no advantage however, but, on the contrary, very great inconvenience, in th

of irritability in general, but has a kind of irritability peculiar to itself; a fact the knowledge of which is of the most essential importance in physiology, since it is upon this principle alone that we are enabled to explain the specific effects, not only of their natural stimuli on different organized beings, and on the different organs of each, but also of numerous preternatural agents, whether deleterious or salutary (a).

endless invention of new terms, to which modern philosophers have been in general so prone, and by which many, who are incapable of distinguishing themselves in any other way, have sought distinction. Many better and less equivocal terms than irritability might unquestionably have been originally invented to express the faculty under consideration; but no man has a right, in the present day, to expect that his new nomenclature, however abstractedly excellent, will entirely supersede the employment of a term already in general use, and, if this be not the case, it can only do harm by adding to the publicity. Perhaps the dentifrangibulous names, "Metatarso-sub-phalangei—transversales—pollicis—pedis" and "Broncho—laryngo—tracheitis—

Perceptivity, without
movement at all (?)
Perceptivity, with insensible
movement.
Perceptivity, with sensible
movement.

{ Glisson
Girtanner }

{ Chaussier }

{ Haller.
Blumenbach.

In the present instance, the term irritability is always employed in its most extended physiological application, as synonymous with vitality, and signifying the susceptibility of undergoing, on the application of a stimulus, any change, which, as not strictly either chemical or mechanical, is characteristic of organized beings.

(a) The doctrine of specific kinds of irritability, as manifested by man, was perhaps better understood in ancient times than that of irritability in general; the necessity for admitting the latter, as a condition of vital action in general, having been superseded by the invention of the vital principle, whereas the peculiarities in the actions of different organs, under precisely the same circumstances, could not be got over without the admission of some modifying agent of this description. These specific kinds of irritability accordingly very soon occupied a prominent place in systems of physiology. They were alluded to first under the name of Genii, or Demons, or Decons of the air, which the ancient Egyptian Pastophori, and their immediate pupils, the first Greek philosophers, supposed immediately to preside, under the control of the great master spirit, or vital principle, over the function of each particular organ of the body; and a remnant of this absurdity is still perpetuated in some almanacs, in which the several members of the body are represented as under the especial care of certain planets. By Hippocrates and Galen, these specific kinds of irritability were called *Δυναμεις*, and were considered to reside, one or more in each organ, in subserviency to the grand

myxo—pyo—meningo—gene" may appear preferable—at least to persons with robust pteregoid muscles—to the terms "Transversi-pedis" and "Croup;" but they are not likely to be universally adopted; so that the onomatomaniacs, without obviating the necessity of our understanding old terms, only impose upon us that of learning new ones likewise. Names in general are

"Not bad *simpliciter*, nor good,

But only as they're understood;"

and it seems quite sufficient to establish any given name as the best, that it is generally employed, and by all who employ it once clearly defined. The following then is a summary of the more or less comprehensive physiological acceptance in which the term irritability is used by the authors above cited.

Ενορμων, or *Πνευμα*, and to be the immediate cause of the peculiar function which it performed. Thus the heart had, according to Galen, at once a *Δυναμις διαστελλομενη*, by which it attracted the blood from the lungs, a *Δυναμις περιστελλομενη*, by which it retained this blood for an instant, and a *Δυναμις συστελλομενη*, by which at length it drove it into the rest of the body; and it is in this fancy that the still employed terms diastole and systole of the heart originated. The arteries, in like manner, had a *Δυναμις ελκτικη*, *καθεκτικη* and *αποκριτικη*, by which they were adapted to their several supposed functions, and so of the stomach and other organs: all which, it must be confessed—for these *Δυναμεις*, be it remembered, were all *per se*—furnishes a very good example of the "vox et præterea nihil," by which pretended explanations of physiological facts are so often distinguished.

It was in ridicule of this that Dean Swift represents the action of a smoke-jack as depending on a meat-roasting power, and that of a fiddle on a tune-playing power; and that Molière makes his candidate for a physician's diploma reply to the question *Quapropter opium facit dormire?* *Quia habet vim dormitivam*. But if strings of words like these furnish no explanation of the peculiar facts in question, they are at least an acknowledgment of this peculiarity. In after times these specific kinds of irritability were understood by Van Helmont under the term *Archæi Insiti*, the number of which was almost infinite, but all were represented as held in subordination by the one sovereign *Archæus*, or the vital principle,

It is true some kinds of stimuli, such as caloric, appear to act almost indiscriminately upon all plants and animals, as well as upon all the organs of each; but such is not the case with by far the greater number of such agents—the blood for instance being adapted to the specific irritability of the heart and parenchyma alone, and the alimentary matters to that of the stomach and intestines, and the indirect stimuli of sympathy and passion having both, in every variety of each of them, their own proper organs on which alone they display any effects. And if this be the case with respect to natural stimuli, it is still more remarkably so with respect to such as are preternatural, every exciting cause of disease, on the one hand, and every agent employed in relieving such disease, on the other, by whatever avenue they may be respectively introduced into the body, operating each on those organs to the specific irritability of which they are severally adapted, while with respect to all the rest they are either wholly or comparatively inert (*a*). To this important principle it will be necessary to allude continually in future, but in the mean time this short notice of it must be sufficient, partly because any discussion of the question at all would involve the consideration of the action of the various stimuli by which irritability in general may be excited, and of which hitherto nothing has been said, and partly because a full elucidation of it would comprehend a multitude of facts each of which will fall to be considered much more conveniently elsewhere.

But admitting that irritability or vitality, general and specific, is a property of the organized solids alone, it becomes a question of the highest interest, whether it be directly inherent in each of the organized tissues, either of plants or animals, or whether it merely appear to be possessed by them all in virtue of some one which is universally distributed over the organized being, and inextricably interwoven with every other. The characteristic actions of organized beings in general have been all shown to consist in certain movements, molecular or sensible, and the only or chief immediate instrument of motion in the

whose court was in the stomach; and by Harvey again, under that of *sensus proprii*, resident one or more in each organ, and distinct from the *anima* which governed them all. Glisson also, with whom originated the doctrine of irritability in general, recognized in each organ a specific modification of this property under the title of *spiritus regens*, which, as he observes, "*aliud in Jecore, aliud in Liene, aliud in Pancreate, aliud in Ventriculo et Intestinis operatur.*" (*De Vent. et Intest.* 1678). The subject of these *imperia in imperio* was still further prosecuted by Bordeu, the father of modern French physiology, who distinctly propagated the doctrine that it was in virtue of its specific kind of irritability, "*que chaque organe sent et remeut à sa manière;*" (*Rech. Anat. sur les Glandes*, 1751), and who certainly suggested to Bichat all that the latter subsequently did in describing each organ as the seat of a *vita propria*, or specific modification of one or other of the two grand lives—the organic and the animal—under which he thought proper to arrange the functions in general. The term specific irritability, appears to have been employed for the first time by Dr. Farr (*on Animal Motion*, 1771), and it has been adopted by Sir Gilbert Blane (*On Muscular Motion*, 1788), and others; and the subject has been collectively treated of, perhaps in the most ample manner by Rolando (*Sur les Différentes Espèces de l'Excitabilité*, &c. 1822).

(*a*) The different character of the irritability of plants and animals is well displayed, among numerous other phenomena, by the very different effects upon the two of galvanism; that of the irritability of different plants by the often diametrically opposite effects upon any two of the same mode

of culture, and that of the irritability of different animals by the quite contrary effects on many of the inferior animals of some agents reputed by man wholesome or injurious. Thus parrots are poisoned by parsley, hogs by pepper, and fowls, dogs, and foxes by sweet almonds; whereas fowls are uninjured by dandelion, and pheasants by stramonium; hogs thrive on henbane, and storks, sheep and goats on waterhemlock; the last again are uninjured by tobacco, the wolf lastly is said to take white arsenic, and the horse corrosive sublimate with comparative impunity. In illustration again of the different character of the irritability of different organs in the same animal, besides the examples alluded to in the text, may be mentioned, among the exciting causes of disease, the action of the syphilitic or hydrophobic virus, to whatever part they may have been applied, the former on the tonsils, skin, and bones, the latter on the muscles of the pharynx, while all the other organs are comparatively unaffected; and, among remedies, that of the white or black hellebore, by whatever avenue they may have been introduced, the one on the stomach almost exclusively, and the other equally exclusively on the rectum. But even the same organ in different individuals of the same species often exhibits very striking differences in the character of its irritability—as connected with age, sex, temperament, idiosyncrasy, and habit of body—witness that of the stomach, which while in some persons it is turned by substances to most people highly acceptable, in others acts with energy on substances in general regarded as repulsive and disgusting. But the full consideration of this subject belongs to another place.

higher tribes of animals is sufficiently well known to be muscular fibre; but while, on the one hand, it is by no means certain—on the contrary, it is very improbable—that it is directly upon this tissue, and not rather upon the nervous, that the vital impression by which the muscular fibre is excited to action, is, in these cases, made, it is obvious, on the other, that, in plants and quite the lowest tribes of animals, we cannot regard irritability as seated in either a distinct muscular, or a distinct nervous system, since they appear to be, with very few, and these somewhat questionable exceptions, equally destitute of both. The possession by them of this property is nevertheless distinctly indicated, not only by all the vital actions which they, more or less, constantly perform, in common with the higher tribes of organized beings, but also by certain sensible motions which many of them display, on the application to them of a stimulus, apparently quite analogous to those which in the latter are effected by muscular contraction. Of these some of the best examples are afforded by the leaves of the Venus' Fly-trap (*Dionaea*), the Wood-sorrel (*Oxalis*), the Humble plant (*Mimosa*), and the Sun-dew (*Drosera*), as well as by the pistils of the Martynia (*Martynia*), and the stamens of the Barberry (*Berberis*), the Prickly Pear (*Cactus*), the Roman Nettle (*Urtica*), the Pellitory (*Parietaria*), and the Swallow-wort (*Asclepias*), all which appear to contract when a stimulus is applied to them; and how easily sensible motions may be excited by similar means in the Branched Polype (*Hydra*, 2), the Sea-feather (*Sertularia*, 3), the Sea-blubber (*Medusa*, 4), the Sea Hedgehog (*Echinus*, 5), and numerous other species among the lowest tribes of animals is sufficiently well known. It is probable, indeed, that many of these sensible motions are effected—as is known to be the case with those of the Humble Plant—by the momentary loss of balance in the distribution of the fluids through the parts manifesting such motions; so that it is by a kind of turgescence in one or other direction, like that which occasions the erection of the penis and other similar organs in the higher tribes of animals, that they are produced; but the action of the vessels, whence alone this loss of balance in the distribution of the fluids can result, does not less imply the possession of irritability than the contraction of the most obvious muscles. Irritability, then, is not the attribute only of a distinct muscular or a distinct nervous system, since it may exist independently of either; but, though neither of these systems may be so far developed in plants and the lower tribes of animals to deserve to be considered as distinct tissues, we are not, on that account, justified in denying that both may exist in them in a diffused and rudimental state, and that in this state they may be still competent to impart to the rest of the system that property which the higher tribes of organized beings derive from these tissues only when concentrated and perfect. If, then, the arguments in favour of the doctrine that either of these systems is, in the latter, the immediate seat of irritability appear to be well founded, we need have no hesitation in believing that it has a corresponding seat in the former; and should not certainly be deterred, as some have been, from regarding these arguments as tenable in their application to the higher tribes of organized beings merely because the muscular and nervous systems are so little obvious in the lower that they seem to be destitute of them, any more than we are deterred from admitting that the lungs and heart, because so little pronounced in some tribes of beings—which nevertheless respire and propel their fluids—as to appear to be wanting, are, in the higher tribes of animals, the chief instruments respectively of respiration and circulation.

Foreign Medicine.

Alum in Tonsilitis, &c.

M. VELPEAU, in a memoir on this subject, endeavours to show that the application of powdered alum applied by the finger to the inflamed parts, almost invariably cures acute sore throats in the space of a very few days. In proof, he quotes 40 cases, in which the efficacy of the remedy was not less extraordinary than rapid. Used for three or four days it is certain to put a sudden stop to the symptoms, provided there is no abscess of the tonsils; the fever decreases, the swelling diminishes, and the appetite returns.

In a second paper the same author mentions the benefit to be derived from alum in a disease not hitherto described, though of frequent occurrence. It consists in an acute inflammation of the bottom of the mouth and inside of the cheek, accompanied with

swelling of the surrounding parts, throbbing pains, inability to move the jaws, fetid breath, and sometimes fever. It is caused by a crushing of a portion of the mucous membrane between the molar teeth. Treated with emollients, bleeding, and other usual remedies, it may continue for a long time; whereas powdered alum brings it round in from two to four days.

[These memoirs are two out of four which M. Velpeau has presented to the French Institute as recommendatory certificates for admission to that body. The British reader will wonder to see a remedy so long used in this country for the purpose he mentions put forward as novel in France. Nor will he wonder less to hear so acute a surgeon as M. Velpeau certainly is, stating that gum-boil—for such is assuredly the last disease he speaks of—is a complaint not hitherto described.]

A NEW PRACTICAL FORMULARY

OF HOSPITALS, OR A

Collection of Formulæ of the Civil and Military Hospitals of France, Germany, Italy, Great Britain and Ireland, &c., containing the Indication of the Doses in which simple Substances, magistral and officinal Preparations of the Codex are administered, the use of New Medicines, and general receipts on the art of prescribing. By M. EDWARDS, M. D., and P. VAVASSEUR, M.D., of the Hospitals of Paris—1834. Translated and augmented by M. RYAN, M. D. &c. &c.

(Continued from p. 313.)

[Ioduretted Sarsaparilla. (Magendie.)

Rx. Decoct. Sarsapar. Oij;
Potassæ hydriodatis, 3j;
Syrupi aurantii, 3ij.

To be taken in twenty-four hours.

Ioduretted Cynoglossus. (Magendie.)

Rx. Decocti cynoglossi, Oij;
Potassæ hydriodatis, 3ss;
Syrupi menthæ, 3ij.

Doses as above.

Employed at the Hotel Dieu in chronic rheumatism and chronic syphilitic affections,

Ioduretted Collyrium. (Magendie.)

Rx. Aquæ rosæ, 3vj;
Potassæ hydriodatis, gr. xxiv;
Iodinæ, gr. i—ij.

This solution is applied four times a day, in ulcerations of the conjunctiva and cornea in scrofulous habits, and a cure is effected in a month. Morphine is sometimes added. T.]

IODATE OF STRYCHNINE.

[This medicine is prepared by saturating powdered strychnine with iodic acid; it is then boiled in alcohol, filtered, and allowed to evaporate spontaneously. By this means we obtain a splendid crystallization of iodate of strychnine.

It is also prepared by double decomposition, by adding the iodate of soda in a solution of the sulphate or hydrochlorate of strychnine. The iodate is precipitated boiling alcohol is employed, and crystallization effected, as already stated. The action of this remedy is the most energetic, and it has been used by M. Magendie with great success in chronic paraplegia after all other remedies had failed. Dose, one-eighth of a grain in pills, one night and morning, increased to eight pills.

M. Magendie recommends hydriodate of potass in epilepsy, and I have given strychnine with decided success. It would, therefore, appear that the iodate of strychnine might be employed with advantage. T.]

BROME.

In large doses it is an irritative poison, whose action is similar to that of iodine; it

is employed like the last mentioned substance, in scrofula and hydrocele.

[M. Magendie employs it, when iodine does not evince sufficient action, or when the patient is accustomed to this remedy. He prescribes it in scrofula, suppression of the menses, and hypertrophy of the ventricles. (Formulary, March, 1835). T.]

INTERNALLY.

Aqueous Solution of Brome.

Rx. Bromii, 3ss;
Aq. destill. 3iss.

Four or five drops, progressively, are given in a glass of water.

HYDRO-BROMATE OF POTASS.

This preparation of potass possesses the same properties as the hydriodate; it may be employed as an antiscrofulous preparation, and as an emmenagogue.

INTERNALLY. Gr. iv—viij, daily, in pills.

Potion with the Hydro-bromate of Potass.

(Magendie.)

Rx. Potass. hydro-brom. gr. xij;
Aq. destill. 3ij;
Syrup althææ, 3i.

Fiat mistura, in die sumenda.

A spoonful at a dose.

EXTERNALLY.

Pommade of Brome. (Magendie.)

Rx. Potass. hydro-brom. gr. xxxiv;
Adipis, 3i.

Fiat unguentum.

Used in frictions, half a drachm or a drachm at a time, in scrofulous swellings,

Pommade of the Hydro-bromate of Potass.

(Magendie.)

Rx. Potass. hydro-brom. gr. xx—xxiv;
Liquoris bromii, gutt. vi—xij;
Adipis, 3i.

Fiat unguentum.

Employed as the preceding pommade. It is more active.

BROMATE OF IRON.

An energetic astringent, possessing the same properties as brome.

It is used in hypertrophy of the heart.

Pills of the Bromate of Iron. (Magendie.)

Rx. Ferri bromatis,
Gum. acaciæ, 3 3 gr. xij;
Confect. rosæ gall. gr. xvij.

Divide in pilulas xxiv, quarum sumat duas mane nocteque.

CHLORIDE OF GOLD.

In large doses it is a powerful corrosive poison, in smaller ones a general stimulant, whose action resembles that of corrosive sublimate, except that it acts less upon the salivary glands than that substance. It is used in constitutional venereal diseases where mercury fails, in scrofula, hydrocele, herpes, &c. The use of this substance requires the greatest caution.

INTERNALLY. Gr. 1-20th—1-16th daily, in pills, with starch, or in solution in distilled water.

Pills of Chloride of Gold. H. of Germ.

Rx. Auri chloruret. gr. x;
Pulv. glycyrrhiz. 3 iij;
Syrup. simplicis, q. s.

Divide in pilulas cc, quarum capiat unam vel duas quotidie.

Each pill contains gr. 1-20th of chloride of gold.

EXTERNALLY. In frictions upon the tongue and the gums, gr. 1-10th— $\frac{1}{2}$ mixed with starch.

Powder of the Chloride of Gold. H. of Italy.

Rx. Auri chloruret. gr. i;
Pulv. amyli, \mathfrak{D} v.

Fiant pulveres, xv.

One of them should be used as a friction.

CHLORIDE OF GOLD AND SODIUM.

This preparation possesses the same properties as the simple chloride; but is more generally used.

INTERNALLY. Gr. 1-20th to 1-10th, in pills.

Antivenereal Pills. H. of Montp.

Rx. Auri et sodæ chloruret. gr. $\frac{1}{2}$;
Extract. saponariæ, 3 i;
Pulv. gum acaciæ, q. s.

Fiant pilulæ xxx, quarum capiat i—viij quotidie.

Each pill contains gr. 1-60th of the chloride.

EXTERNALLY. Gr. 1-15th mixed with starch, in frictions in the interior of the mouth.

Powder of the Chloride of Gold and Sodium.

H. of Montp.

Rx. Chlor. auri et sodii, gr. i;
Pulv. iridis florent. gr. ij.

Misce intime, et divide in chartulas, xv.

One of these powders should be used at each friction.

Pommade of the Chloride of Gold and Sodium. (Magenlie.)

Rx. Chlor. auri et sodii, gr. x;
Adipis præpar. 3 ss.

Fiat unguentum.

This pommade is applied to the surface of a small blister, to cause an absorption of the salt of gold.

OXIDE OF GOLD.

It possesses the same effect as the chloride.

It is employed in complicated cases of scrofula and syphilis.

INTERNALLY. Gr. 1-10th—j, daily.

Pills of the Oxide of Gold. H. of Montp.

Rx. Auri oxidi, gr. vj;
Ext. mezerei, 3 ij.

Divide in pilulas lx, sumat ij—x quotidie.

Each pill contains gr. 1-16th of the oxide of gold.

GOLD.

When brought into an extreme state of division, it acts like the preceding preparations. It is only employed externally by the endermic method, and to excite venereal ulcerations of the palate.

Syrup of Gold. H. of Montp.

Rx. Auri, \mathfrak{D} j;
Syrup. acaciæ, 3 i.

Misce.

Employed in lotions in ulcers of the pharynx, and to cancers, &c.

Pommade of Gold. H. of Montp.

Rx. Auri, 3 i;
Adipis, 3 i.

Fiat unguentum.

Employed in frictions on buboes, and also applied to the surface of blisters.

[When the ulcers shew a tendency to cicatrise, the following ointment is preferred, and also to dress setons, according to M. Magendie, 1835. (*Op. cit.*):—

Rx. Auri et sodii muriat, \mathfrak{D} ss;
Adipis preparat. 3 iv.

THE SALTS OF PLATINA.

These are prepared in the same manner as those of gold, and are said to possess the same properties. M. Magendie does not appear to have employed them; or if he have, he has not mentioned the doses. (*Op. jam. cit.* 1835). T.]

CHLORIDE OF BARIUM.

In large doses it is a violent poison; in smaller ones it appears to be useful in scrofulous diseases, engorgements of the viscera and lymphatic glands, scirrhus affections, dropsies, &c. It is also used as an anthelmintic. It is not much employed at the present day, and its administration requires the greatest caution, on account of its poisonous effects. It is sometimes used as an excitant and a feeble escharotic in lotions on scrofulous ulcers.

INTERNALLY. Gr. $\frac{1}{4}$ — $\frac{1}{2}$, in a mucilaginous vehicle.

Solution de Muriate de Baryte. P. (Muriate of baryta, 1 part; distilled water, 5 parts.) Gutt. ij—x, in a mucilaginous potion.

Antiscrofulous Solution. H. of Germany.

Rx. Chlor. barii,
Ferri hydrochlor. $\mathfrak{a}\mathfrak{a}$ 3 ss;
Aq. destill. 3 i.

Fiat solutio.

Dentur gutt. xx—lx pro dosi. In a mucilaginous vehicle.

Each drachm contains gr. ivss of the chloride.

Antiscrofulous Pills. H. of Italy.

Rx. Barii chlor. gr. i;
Extract conii, gr. ij;
Succi sambuci, q. s.

Fiant pilulæ iv, quarum sumatur una sexiâ quaque horâ.

EXTERNALLY. Solutions. In lotions on scrofulous ulcers.

Resolvent Drops. H. of Germ.

Rx. Barii chlor. gr. xij;
Aq. destillatæ, ℥ ij.

Fiat solutio.

A few drops to be injected into the eye, in pearl or opacity of the cornea.

HYDROCHLORATE OF LIME.

Its mode of action resembles that of the muriate of barium, only that it is not poisonous—it should be preferred to that medicine; nevertheless it is not much used. It is employed in scrofulous affections and swelling of the lymphatic glands. In large doses it is a purgative.

INTERNALLY. Gr. vi—3 i, dissolved in water.

Solution of Muriate of Lime. H. of London.

Rx. Calcis muriat. ℥ ij;
Aq. destillatæ, ℥ iij.

Calcis muriatem in aquâ liqua tum per chartam cola. Guttæ xxx—3 i sumantur, e cyatho aquæ cum saccharo.

CHAPTER IX.

MEDICINES WHICH ARE USED AS EXCITANTS OF THE NERVOUS SYSTEM.

NUX VOMICA.

IN large doses this is a most violent narcotico-acrid poison; in small ones it is an energetic stimulant of the nervous system: its principal action is on the spinal marrow, and it excites spasmodic contractions of the muscles. It is administered internally in the treatment of paralysis which does not depend on cerebral lesion or disorganization, in contraction and atrophy of the extremities or limbs, in certain cases of amaurosis, incontinence of urine, &c. Its administration requires the greatest precaution.

INTERNALLY. Powder. Gr. iv—xij, progressively, in pills.

Extrait alcoolique. P. Gr. ½—iv, in pills. The dose may be gradually increased to gr. x—xv.

Tincture. Gutt. v, gradually increased to xxx, in a potion.

Alcool. de Noix Vomique. F. de M. (Extract of nux vomica, gr. iv; alcohol (36°), ℥ i.) Gutt. xx—xxx, and more.

It is used externally in paralysis and atrophy.

Powder of Nux Vomica. H. of Germ.

Rx. Pulv. nucis vomic. gr. iij;
Gummi acaciæ,
Sacchari, āā, gr. xij;

Divide in chartulas sex, quarum sumat ij—vj quotidie.

Pills of Nux Vomica.

Rx. Extract nucis vomic. alcohol. ℥ ss;
Confect. rosæ gallic. ℥ ij.

Fiant pilulæ xxxvj, quarum sumat unam quotidie.

The dose should be gradually increased.

Stimulating Pills. H. of Italy.

Rx. Pulv. nucis vomicæ, gr. xxx;
Conf. rosæ gallicæ, q. s.

Divide in pilulas x, capiat ij in die.

Solution of the Extract of Nux Vomica. H. of Germ.

Rx. Extract. nucis vomicæ, gr. x;
Mucilag. acaciæ, ℥ i;
Aquæ puræ, ℥ vi.

Sit solutio.

Dosis cochleare magnum secundâ quaque horâ, ex ℥ i, syrupi acaciæ vel aquæ hordei.

EXTERNALLY. Tincture. P. In frictions on parts affected with paralysis.

Liniment of Nux Vomica. (Magendie.)

Rx. Spirit nucis vomic. ℥ j;
Liquoris ammoniæ, ℥ ij.

Misce.

This was employed with good effects, and also in the malignant or blue cholera of Paris, 1832.

ALCOHOLIC EXTRACT OF NUX VOMICA.

It is used in all cases of debility, whether general or local; in amaurosis with paralysis of the eyelid (M. Edwards); with the best effects in debility of the genital organs, incontinence of urine, &c.; indigestion, partial atrophy of the superior and inferior extremities (Magendie, Formulaire pour la Preparation et l'Emploi de Plusieurs Nouveaux Medicaments, &c., 1835). It should not be given in paralysis succeeding apoplexy or cerebral hæmorrhage. It was given to an infant aged three years and a half, affected with hemiplegia after measles, with success: dose, half a grain every four hours. In paralysis of the arm, the dose was increased, during fifteen days, to thirty grains three times a-day (Gendr. Journ. Gen. de Med., 1824); in St. Vitus's dance, after all means had failed (M. Cazanave). The best mode of exhibiting it is in pills: dose, half a grain twice a day, gradually increased. Its effects are tremblings and tetanic spasms.

STRYCHNINE.

The active principle of nux vomica, acting consequently in the same manner, but with more energy. It is employed in the same cases. It is an alkali.

[This medicine possesses the most extraordinary influence on the brain, spinal marrow, and ganglionic systems, or, to speak scientifically, on the cerebro-spinal and ganglionic system (sympathetic system). I have not only employed it in paralysis and nervous disorders in all parts of the body; but in a host of maladies of Protean form which are referable to disordered innervation. I am in the habit of using it daily in all the forms of hysteria, in chorea, nervous apo-

plexus, hypochondriasis, neuralgiae, spinal irritation, hemicrania, hemiplegia, paraplegia, and partial paralysis; and the patients under my care are examined by several intelligent students, some of whom were in practice. I have also used it successfully in diarrhoea with rice-coloured dejections, and accompanied by blueness of the extremities, in dysentery, colic, and other spasmodic disorders. I order it daily in cases of hysteria, dyspepsia, &c., in the dose of 1-12th of a grain, morning and evening. It causes a degree of warmth in the stomach, and rapidly relieves the sense of sinking at the epigastrium, so troublesome to dyspeptic and nervous persons. It possesses great power on the sympathetic or ganglionic, as well as on the cerebro-spinal system, and thence relieves disordered nervous function in all parts of the body. I seldom exceed 5-12ths of a grain daily, as I have tried the medicine in a vast number of cases, and few persons will bear a larger dose. T.]

INTERNALLY. *Powder.* Gr. 1-12th—1-18th, in pills.

Alcool de Strychnine. F. de M. (Strychnine, gr. iij; alcohol, ʒ i). Gutt. vj—xxiv, in a potion.

Powder of Strychnine. H. of Italy.

Rx. Strychninae, gr. i;
Oxydi ferri nigri, ʒ i;
Sacchari, ʒ iij.

Divide in chartulas vj, quarum sumat unam mane nocteque.

Pills of Strychnine. (Magendie.)

Rx. Strychninae, gr. ij;
Conf. rosae gall., ʒ ss.

Misce. et divide in pilulas xxiv, ex quibus capiat unam mane nocteque.

Pills of Strychnine. (Ryan.)

Rx. Strychninae, gr. i;
Confect. rosae, ʒ ss;
Pulv. glycyrrhiz. ʒ ss.

In pilulas xij divide, quarum capiat unam mane nocteque, et augeatur dosis ad iv vel v quotidie.

It is necessary to regulate the bowels previous to the exhibition of strychnine, which is a powerful astringent. I have repeatedly known a few of the preceding pills check a profuse diarrhoea with rice-coloured dejections, and even when the extremities were blue in malignant cholera.

Potion with Strychnine. (Magendie.)

Rx. Strychninae, gr. i;
Sacchari, ʒ iij;
Acid acetic. gutt. ij;
Aq. destillatæ, ʒ ij.

Fiat potio, cujus capiat cochleare min. mane nocteque.

The dose should be gradually augmented to three or four spoonful.

EXTERNALLY. Gr. 1-12th— $\frac{1}{2}$, applied on the surface of a small blister placed on the temple or eyebrow in amaurosis. The me-

dicine has been also used endermically in paralysis and atrophy.

Test for Strychnine.—Good strychnine will not be reddened by nitric acid.

SULPHATE OF STRYCHNINE.

Its action is the same as that of strychnine, but more energetic, on account of its great solubility. It is sometimes had recourse to in diseases which have resisted the action of strychnine.

INTERNALLY. *Powder.* Gr. 1-20th—1-12th, in pills, with q. s. of the confection of red roses, or in a draught.

BRUCINE.

The active principle of false angustura; it acts on the system in the manner of strychnine, but less powerfully. It has been employed with advantage in certain cases of paralysis, in atrophy of the limbs, and in some analogous cases.

[According to Andral, six grains are equal to one of strychnine. T.]

INTERNALLY. *Powder.* Gr. $\frac{1}{4}$ —vj, progressively.

Alcool de Brucine. F. de M. (Brucine, gr. xvij; alcohol (36°), ʒ j). Gutt. vj—xxiv, in a potion.

Pills of Brucine. (Magendie.)

Rx. Pulv. brucinae, gr. xij;
Confectio. rosae, ʒ ss.

Divide in pilulas xxiv, ex quibus capiat ij quotidie.

The dose may be progressively increased to six in the day.

Stimulating Potion. (Magendie.)

Rx. Brucinae, gr. vj;
Aq. destill. ʒ iv;
Sacchari, ʒ ij.

Fiat mistura de qua cochleare magnum sumatur mane nocteque.

[The sulphate, hydrochlorate, phosphate, oxalate and nitrate of brucine are not employed medicinally. T.]

PHOSPHORUS.

Phosphorus is one of the most energetic poisons. When used in extremely small doses, it is a powerful excitant of the nervous system, and appears to act likewise on the organs of generation. It is recommended in typhoid fevers accompanied with excessive adynamia, in certain cases of paralysis, gout, obstinate rheumatism, &c. It is a dangerous medicine, and requires the most serious attention when employed.

INTERNALLY. Gr. $\frac{1}{8}$ —i daily, in an emulsion.

Ether Phosphorée. P. (ʒ i contains about gr. $\frac{1}{2}$ of phosphorus). Gutt v—x in an emulsive potion, may be gradually increased.

Phosphorated Oil.

Huile Phosphorée. F. de M. (Phosphorus, ʒ j; oil of sweet almonds ʒ ij; after the phosphorus is perfectly dissolved, decant,

and add q. s. of the essential oil of bergamot). Gutt xx—xxx in an emulsive potion, a spoonful to be taken for a dose. Each drachm contains gr. 4½ of phosphorus. (March 1835). See APHERODISIACS.

EXTERNALLY.

Pommade Phosphorée. P. In frictions, but with the greatest care. (Phosphorus two parts, adeps and aqua, āā 100 ol. lavend. q. s.).

PHOSPHORIC ACID.

[Dr. Lentin of Gottingen applied a lotion composed of one part of phosphoric acid, and eight of distilled water twice a day, to ulcers caused by caries of the bone. (Magen-die's Formulary 1835. T.)]

ARNICA. (FLOWERS AND ROOT.)

A very active stimulant to the nervous system. It is used in chronic rheumatism, paralysis, and amaurosis. It is also recommended as a febrifuge. The flowers pulverized act powerfully.

Subst. Incompat. The sulphates of iron and zinc, the acetate of lead, the mineral acids, &c.

INTERNALLY. Flowers. Powder, gr. vj—x and gradually increased xxx—vj.

Decoction and Infusion, 3j—iv to Oij of water. They should be filtered through paper.

The root. Powder, gr. xij—3i.

Decoction. The same as the flowers.

Tincture éthérée. P. ʒi—3ss in a potion.

Infusion of Arnica. Hot. D. H. de la Ch.

Rx. Florum arnicæ montanæ, 3j;

Aquæ ferventis, Oij.

Cola per chartam.

A teaspoonful to be taken at a time and frequently repeated. An ounce of the syrup of orange peel may be added to this infusion. It is employed in certain cases of apoplexy, paralysis, &c.

Infusion Nervine d'Arnica. H. of Italy.

Rx. Radicis arnicæ mont. 3ij;

Aquæ ferventis, q. s.

Coque ad, 3vj, per chartam cola et adde, Etheris sulphurici, ʒij.

The dose is a spoonful at a time.

Vinous Infusion of Arnica. H. of Germ.

Rx. Flor. arnic. mont. 3ss;

Aquæ puræ,

Vini albi, āā 3vj.

Coque, cola, et adde,

Syrup. cort. aurant, 3ss.

Misce.

The dose is half a glassful every hour.

Compound powder of Arnica. H. of Germ.

Rx. Pulv. rad. arnicæ,
——— serpent.

Olei menth. piper. āā 3ij.

Divide in chartulas vj, quarum capiat unam, secundā quāque horā.

In severe fevers accompanied with diarrhæa.

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Stimulating and Tonic Bolus. H. de Montp.

Rx. Pulv. flor. arnicæ,

Camphoræ, āā gr. iv;

Theriaceæ, q. s.

Fiat bolus.

EXTERNALLY. *Decoction.* In lotions, fomentations, &c.

ALCOHOL.

Alcohol is one of the most energetic diffusible stimulants. It acts, when concentrated, as a violent poison; when diluted, and in small doses, it causes a general stimulation; in large doses, it produces ebriety and may occasion death. Alcohol at 36° or rectified spirit of wine, is used in preparing tinctures, &c. It is never employed alone as medicine. Diluted with water, it is used as a tonic and stimulant in diseases accompanied with adynamic symptoms, typhus, convalescence after serious illness, delirium tremens, &c. It is used externally, concentrated, as a rubefacient; and when diluted with water as an astringent, tonic, and refrigerant, in many circumstances.

INTERNALLY. 3j—3ij diluted, in drinks.

Punch. H. des Enf.

Rx. Spirit. rectificati, 3ij;

Tincturæ melissæ, 3ij;

Syrupi simplicis, 3j;

Potion. acaciæ, 3ij.

Misce.

Given in smaller quantities to children of a debilitated habit, and in dangerous fevers, in convalescence after long and severe illness, &c.

Alcoholized Lemonade. Hot. D.

Rx. Alcoholis,

Mellis, āā 3i;

Syrupi tartarici, 3ij;

Aquæ, Oij.

Misce.

Employed in the same cases as the preceding preparation.

Stimulating Drinks. H. of Germ.

Rx. Alcohol. 3ias;

Inf. cort. aurant. Oij.

Misce.

A small cupful at a dose.

EXTERNALLY.

In frictions, lotions, and fomentations, as excitants and stimulants.

Astringent Lotion.

Rx. Alcohol. 3ij;

Aquæ calcis, Oss.

Fiat lotio.

WINE.

Astringent wines act as tonics as well as excitants; sparkling wines, whose actions are carried to the brain, and which are very quick in taking effect, exercise, notwithstanding the small portion of alcohol they contain, a marked diuretic influence.

Wine is administered with advantage in

certain cases of adynamic and ataxic fevers, in scrofulous and scorbutic affections, and in all asthenic diseases. It also serves as a vehicle for many medicines, and enters into the composition of a great many official preparations.

[Diluted with water and sweetened, it is of great value in diseases of infants attended with much prostration of strength, and also as a vehicle for quinine. T.]

INTERNALLY. Diluted with water, with or without sugar, as a drink in certain fevers accompanied with adynamia.

[Wine whey was an old remedy in such cases. T.]

Pure, a spoonful at a dose, in convalescence after serious illness.

Alcoholized Vinous Lemonade. Hot. D.

Rx. Vini albi,
Aque, ā ā Oj;
Alcohol, ʒ i;
Syrup. tartar. ʒ ij.

Misce.

Taken as a drink in certain atonic affections, &c.

EXTERNALLY. In lotions, fomentations, local baths, &c.

Vinous Fomentation. Hot. D.

Rx. Ros. gall. petal. ʒ i;
Vini rubri, Oj.

Decoque et cola.

It is frequently applied to certain indolent ulcers.

Vinous Fomentation of Sage. H. de la Ch.

Rx. Vini rubri, Oj.
Foliorum salviæ, ʒ i.

Decoque et cola.

It is used in the same manner as the preceding one.

The Fomentation Vineuse Alcoolique, of the same hospital, is made by adding ʒ viij of camphorated alcohol, and in replacing the leaves of sage by an equal quantity of juniper berries, the Fomentation Vineuse de Baies de Genievre, of la Char., is formed.

Vinous Lotion. H. des Enf.

Rx. Vini, Oj;
Mellis, ʒ ii.

Fiat lotio.

Applied to wounds and ulcers of an unhealthy aspect.

Irritating Injection. H. de Paria.

Rx. Vini fervent. Oij;
Alcohol. q. s.

Employed in the operation of hydrocele by injections, in cases of large openings of the integuments by chronic abscesses.

CHAPTER X.

MEDICINES EMPLOYED IN GENERAL AS ANTISPASMODICS.

SULPHURIC ETHER.

In large doses it irritates the stomach extremely, and at the same time produces a

kind of ebriety. In small ones, it acts on the nervous system, sometimes as a sedative, at others as a lively stimulant, but always in a transient manner. It is employed with advantage in the generality of nervous affections, such as spasmodic vomiting, nervous colics, hysteria, asthma, and, in general, all neuroses, typhoid fevers, to calm convulsive movements, hiccup, &c. It is frequently used to combat ebriety, and is recommended as a febrifuge and anthelmintic. It is often very useful, in enemata in nephritic colic. Its vapour is employed to irritate the pituitary surface in cases of syncope, and may prove very useful in certain nervous affections of the respiratory organs. Externally it serves as a refrigerant in certain cases of neuralgia, megrim, &c. In fine, this liquid is employed as a solvent for a great number of medicines.

INTERNALLY. Gutt. vi—x with sugar, or xx—ʒ ss in a potion.

Potion Antispasmodic. P. A spoonful at a dose.

[Sulphur. ether, ʒ j; orange-flower water, ʒ iv—syrup, ʒ j.]

Ether sulfurique Alcoolisé, or Liqueur Anodyne D'Hoffman, gutt. x—ʒ j, in a potion.

Sirap d'Ether. P. ʒ ss—i, in sedative and antispasmodic potions.

Potion Gommeuse Etherée. H. de la Ch.

Rx. Ether. sulphur. gutt. xvij;
Potionis gummi, ʒ iv.

Fiat potio, cujus capiat cochleare magnum pro dosi.

Potion with Mint Water. H. St. Ant.

Rx. Ether. sulphur., ʒ ss;
Aque menthæ, ʒ iv;
Syrup. simpl. ʒ ss.

Misce. Dosis coch. magnum.

Antispasmodic Potion. Hot. D.

Rx. Etheris gutt. xxx;
Infusi tiliaë,
—— flor. aurant, ā ā ʒ i;
Aq. destill. menthæ,
Aque destill. melissæ,
—— flor. aurant, ā ā ʒ j;
Syrup. simplicis, ʒ i.

Misce. Dosis cochleare magnum.

The Antispasmodic Potion, of the H. St. Ant., does not contain the distilled waters, and the ether is replaced by ʒ ss of alcoholized sulphuric ether.

The *Potion Calmant*, of the H. des Ven., is similar to the preceding one. It is composed of the gutt. xv of the anodyne liquor of Hoffman, and the same quantity of laudanum to ʒ v of the infusion of tilia and ʒ iij of orange flower water.

The *Potion Antihysterique*, of the same hospital, differs from the preceding by the addition of alcoholate of amber, and of castor, ā ā gutt. xv. It is employed in nervous affections accompanied by severe pains or convulsions.

The *Potion Antispasmodique*, of the H. des

Enf., is almost the same as the *Potion Calmant des Ven.*, except that it does not contain the laudanum; and the liquor of Hoffman is replaced by 3 ss of sulphuric ether.

NITROUS ETHER.

It possesses the same properties, and is used in the same cases as sulphuric ether; it appears to act also as a diuretic. It is employed in some diseases of the liver.

INTERNALLY. Gutt. xx—xxx, in a potion.

Ether Nitrique Alcoolisé. P. Gutt. xxx, and even more, in a potion, as a diuretic.

Acidulated Julep. H. of Germ.

Rx. Etheris nitrici, ℥i;
Decocti hordei, ℥xxiv;
Syrup. limon. ℥ij.

Misce.

A small cupful at a dose.

Sedative Emulsion. H. of Montp.

Rx. Ether. nitr. cum alcohol. gutt. xxiv;

Emulsion. sem. melonis, ℥iv;
Syrup. nymphaeae alb. ℥i.

Fiat emulsio, cujus sumatur coch. mag. pro dosi.

In gonorrhœa.

EXTERNALLY. *In frictions*, as a refrigerant. Any quantity.

Antiphlogistic Gargle. H. of Germ.

Rx. Etheris nitrici, ℥ss;
Decocti althææ, Oij;
Syrupi ejusdem, ℥ij.

Misce.

HYDROCHLORIC ETHER.

It possesses the same properties, and may be used in the same case cases, as the preceding preparations. It is not much employed.

INTERNALLY. Gutt. xx—xxx, and even more, in a potion.

Ether hydrochlorique Alcoolisé. P. Gutt. xx—3 ss, in a potion.

ACETIC ETHER.

It has the same properties, and may be employed in the same manner as the preceding. It is not much used except externally, in frictions on those parts affected with rheumatism and neuralgia.

INTERNALLY. Gutt. 3 ss, in a potion.

EXTERNALLY. Gutt. 3 ij—iv, in frictions.

SUBNITRATE OF BISMUTH.

In doses of a drachm, an irritant poison; in small doses a very efficacious sedative in neuralgia of the stomach and intestinal canal, according to MM. Odier, Delaroche, Clarke, Lombard, Trousseau, &c. It is employed with great success in gastralgia, pyrosis, gastro-enteralgia, chronic gastritis, chronic diarrhœa, spasmodic cholera, to calm the cramps of the stomach, and to subdue the spasmodic diarrhœa and vomiting.

INTERNALLY. Gr. x—xx, and even 3j, in twenty-four hours, in pills, or in a mucilaginous vehicle.

Sedative Powder. H. Dieu.

Rx. Bismuth. subnit. gr. iv;
Magnesiæ calcin.,
Sacchari purif., ā ā gr. xl.

In chartulas iv divide, capiat j, singulis horis.

Tonic Pills. H. of Amer.

Rx. Bismuth. subnit. ℥ij;
Mucilag. acaciæ, q. s.

Fiant pilulæ xxxvj. Dosis j, secundis horis.

In dyspepsia.

CAMPHOR.

In small doses it acts as a sedative; in large ones it is a very energetic excitant, which causes very violent nervous symptoms, and may even occasion death. It is employed internally in nervous and spasmodic affections, such as neuralgia, spasms of the bladder and œsophagus, hysteria, chorea, &c. It is also used in typhoid fevers, to combat nervous symptoms, and especially delirium, subsultus of the tendons, &c. It is strongly recommended as an antiaphrodisiac.

[It is said to facilitate the action of mercury. (See *Mercury.*) T.]

It is used externally with much advantage in rheumatic pains, gout, neuralgia, &c. It is a medicine which is very much employed.

INTERNALLY. Gr. ij—℥i, and even 3 ss or 3 i daily, in pills, or suspended in a vehicle by the aid of the yolk of an egg or of a mucilage.

Potion camphrée. P. The dose is a spoonful at a time.

Camphorated Powders. H. of Germ.

Rx. Camphoræ,
Acid. benzoic, ā ā gr. vi;
Sacchari, 3i.

Divide in chartulas vi, quarum capiat unam tertiâ quâque horâ.

Camphorated Boluses. H. of England.

Rx. Camphoræ,
Conf. rosæ, ā ā 3i.

Fiant boli xij, e quibus sumatur una quartâ vel sextâ quâque horâ.

Boluses of Camphor and Nitre. H. Militaires.

Rx. Pulv. camphoræ,
Potass. nitratis, ā ā ℥i;
Confect. rosæ, q. s.

Divide in bolos vi quarum sumat, iv—vi quotidie.

In typhous fevers.

In the *Bols Camphrés* of the Hot. D., the confection of roses is replaced by starch and syrup.

In the *Pilules Antiseptiques* of the H. St. Ant., the starch is replaced by gum acaciæ: the above quantity is divided into xvij pills, iv—xii daily.

The *Bols Camphrés et Nitrés* of the H. de la Mat. contain only gr. viii of camphor and vi of nitre, united by q. s. of the yolk of an egg.

Boluses of Camphor and the Hydro-sulphate of Antimony. H. de la Mat.

Rx. Camphoræ, ℥i;
Antim. dydro-sulph. gr i;
Potass. tart. gr. xvi;
Vitelli ovi, q. s.

Divide in bolos iv.

Used in certain fevers accompanied with prostration of strength.

Sedative Pills. Hot. D.

Rx. Camphoræ, gr. xij;
Hydrargyri submur. gr. vi;
Syrupi simplicis, q. s.

Fiant pilulæ iv.

Antispasmodic Pills. Hot. D.

Rx. Camphoræ, gr. vi;
Extracti opii, gr. j;
Nitratis potassæ, gr. iv;
Syrupi simplicis, q. s.

Divide in pilulas vi.

Pills used in Hospital Gangrene. Hot. D.

Rx. Camphoræ, ℥i;
Moschi, gr. viij;
Ext. opii, gr. ij;
Syrup simpl. q. s.

Fiant pilulæ viij.

Each pill contains gr. iij of camphor.

Antiseptic Potion. Hot. D.

Rx. Camphoræ, gr. x;
Decoct. cinchon. ℥iv;
Tinct. cinnam. ℥i;
Ammoniaæ acet. ā ā ℥i;
Syrup. simplic. ℥i.

Fiat potio, cujus sumatur cochl. mag. pro dosi.

In Fevers accompanied with adynamia.

Emulsion of Camphor with Nitre. H. of Germ.

Rx. Camphoræ,
Potass. nitrat., ā ā gr. xv;
Vitelli ovi, q. s.

Tere et adde,

Aquæ tilia, ℥iij.

Fiat emulsio, cujus cochl. magnum sumatur pro dosi.

Employed to diminish painful erections in acute urethritis.

The *Potion Camphrée*, of the Hot. D., differs from the preceding in the dose of the camphor and nitre being raised to ℥i, in the yolk of the egg being replaced by acacia gum, and in the vehicle being ℥v of the pectoral infusion, sweetened with ℥i of the syrup of capillaire. It is administered in the same cases.

Camphorated Potion with Ether. H. of Germ.

Rx. Camphoræ, ℥i;
Ether. sulph. ℥ij;
Liq. opii (Sydenham), gutt. xx;
Aquæ cinnam. ℥vi.

Fiat potio, cujus capiat cochleare magnum tertiâ vel quartâ quaque horâ.

Camphorated Water with Ether.

Rx. Camphoræ,
Ether. sulph. ā ā ℥i;
Aquæ, ℥vii.

Dissolve the camphor in the ether, and then pour the solution into a vessel containing the water. This vessel ought to have a tube and a small cock at its base, and the neck should be furnished with a straight tube, enveloped in a piece of lint. The dose of this liquor is a spoonful, with syrup in nervous affections.

Camphor Mixture. H. of England.

Rx. Camphoræ, ℥i;
Spirit. rectific. gutt. x;
Sacchari, ℥ss;
Aquæ, Oj.

Triturate the camphor with the spirit, and then with the sugar; add the water, and strain.

The dose is ℥j—ij every three or four hours.

It is often used as a vehicle for other medicines.

[The addition of magnesia, according to the Dublin pharmacopœia is a great improvement. T.]

EXTERNALLY. *Alcohol Camphré.* P. In lotions, fomentations, &c.

Liniment Camphré. P. q. v. In frictions.

Baume Opodeldock. P. In frictions on those parts affected with rheumatism.

Enema of Camphor. H. de la Mat.

Rx. Camphoræ, ℥ij;
Vitelli ovi, No. 1;
Decocti hordei, Oij.

Misce pro enema.

Employed in fevers accompanied with adynamia, and as a sedative in painful neuralgia, &c.

Lavement Antiseptique. H. Dieu.

Rx. Camphoræ, ℥ij;
Cinchonæ, ℥i;
Aquæ, Oij.

Misce.

Employed in fevers in which there is a tendency to gangrene.

Camphorated Gargle. H. of Italy.

Rx. Camphoræ, ℥i;
Ether sulph., ℥i;
Syrup. simplic., ℥i;
Aquæ, Oij.

Fiat gargarisma.

Used in maglignant angina.

Camphorated Vinegar. H. Militaires.

Rx. Camphoræ, ℥i;
Acet. fort., ℥viij.

Liqua.

Employed in lotions, Frictions, &c.

Camphorated Fomentation. H. of Germ.

Rx. Camphoræ, ℥iv;
Acid acetic, ℥ij;
Aceti, ℥x.

Fiat lotus.

Employed in fomentations to parts threatened with gangrene.

Lotion of Elder with Camphorated Alcohol.
H. des Enf.
℞. Spirit. rect. cum camph. ʒ ij;
Infusi flor. sambuci, Oj.
Fiat lotio.
Employed in the treatment of indolent glandular swellings, in children of a scrofulous habit.
(To be continued).

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Reviews.

An Exposition of the Nature, Treatment, and Prevention of continued Fever. By Henry M'Cormac, MD. 8vo. pp. 202. London: Longman & Co. 1835.

ON a former occasion we gave a brief notice of this work, and now redeem our promise to place its merits before our readers. The subject of it has occupied the attention of our profession from the earliest period of medical history; and though a vast deal has been written upon it in all ages, its real nature is still unknown. The author of the volume before us has quoted a great number of ancient and modern writers on fever, and placed their views in a perspicuous order before his readers. He has also added the result of his own experience, and given the fullest account of the disease, hitherto published in our language. He has, however, been guilty of a serious omission in having neglected a proper arrangement of his matter, and published the whole, without any order, or even a table of contents to guide the reader. His work is one chapter: the etiology, pathology, and treatment of fever are only to be discovered by perusing the whole volume; and this is what few can accomplish, at least those who are actively engaged in practice. This is a matter of regret, as in all other respects, the work comprises the views of the most renowned writers of many centuries; and it is really astonishing that the author could have condensed such a fund of information within so small a compass. The want of arrangement of the contents precludes the possibility of our attempt to analyze, while the nature of the subject, and the limits by which we are circumscribed, remind us that we could not occupy several numbers with extracts, to the exclusion of much more practical and valuable matter to the bulk of our readers. The weekly medical periodicals cannot give long reviews, unless of works containing a variety of practical information. They can only notice the majority of productions of this description.

We have, however, said enough of this work to induce our readers to peruse and possess it; and we trust its author will, in the next edition, give an index or table of contents, and arrange his matter in separate sections.

As a compilation, this work is unequalled in our literature, and well deserves a place in every medical library. It comprises the doctrines and opinions of the best writers on fever, of this and other countries.

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The Practice in the Liverpool Ophthalmic Infirmary for the Year 1834; being the First Special Report. By Hugh Neill, Surgeon to the Charity. 8vo. pp. 55. A Plate. London: Longman and Co. 1835.

WE highly approve of the laudable example set by the author in publishing an annual report of the diseases treated at a provincial public charity. Such a proceeding is not only valuable to the governors, but also to the cause of science. Many are too lazy, indolent, or incompetent to perform the task of arranging materials for a clinical report, while others are deterred from the attempt by the fear of criticism.

Mr. Neill, in a prefatory address to the governors, ably and properly contends, that the publication of a clinical report is legitimate, that publicity is essential to the full development of a charity, and that there is a moral as well as professional necessity for making public the practical results in such an institution. We fully agree to all these sentiments. He is also justified in arguing in favour of the advantages which accrue from the subdivision of labour in the arts and sciences. We hold, however, that every medical practitioner should be deeply versed in all diseases, and practise in those he pleases, or to which his inclination leads him. The mere oculist, aurist, dentist, &c., would be a bad, dangerous, and ignorant practitioner; and fortunately for humanity and science, few such incompetent persons now exist amongst us. All rising medical men study every form of human infirmity; but prefer a certain branch of our science.

After having disposed of the preceding general observations, our author gives a tabular view of the diseases of the eye, which fell under his treatment in 1834, with a

history of some of these, which proves him to be a scientific surgeon, and an excellent operator. His explanation of the operations for cataract is good; while his narrative of cases of blindness cured by operation, must not only be highly gratifying to himself, as well as to the governors of the Liverpool Ophthalmic Infirmary, but to the public. We hope to see a continuation of clinical reports from this institution, and others from the many charitable establishments in the great town of Liverpool. We are delighted at the brilliant prospects of our brethren in that quarter; and we trust, ere long, not only to have the pleasure of recording the establishment of a medical institution, but of one or more medical schools in Lancashire.

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An Inquiry into the Nature and Causes of Lateral Deformity of the Spine; in Reference, more especially, to the pernicious effects of certain Moral and Physical Influences, resulting from the modern system of Female Education. By Edward W. Duffin, MD. 8vo. pp. 94. London: 1835.

WE have expatiated so much on the subject of spinal deformities in our last number, that to re-enter upon it, would be a work of supererogation. We have touched on many causes of spinal deformities omitted by our author, comprised all the topics in his work, and given a much fuller account of the treatment.

He directs his attention to three parts of female education—dress, studies, and amusements. We find nothing unnoticed by us under these heads; and consequently cannot again comment upon them. In making this statement, we by no means intend or wish to insinuate, that there is not much instructive matter in the essay before us, especially to those who have not perused other tracts, works, or lectures on the same subject. But we must observe, that the author might have dilated to a greater extent than he has done, more particularly in a tract better suited for the general than the medical reader. He has, however, written enough to convince those engaged in the business of education, of the formidable evils of tight lacing, the erect attitude for six or twelve hours at one time, and the objectionable amusements allowed female children.

This essay would be of immense good, if perused by parents, or those engaged in the superintendence of scholastic pursuits.

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A Treatise on the Causes and Treatment of Ulcerous Diseases of the Leg. By — Spender. London: Longman. pp. 210.

THERE is perhaps no department of surgery less tempting to practical investigation than the causes and treatment of ulcers of the legs, and yet, estimating the importance of disease by the number of its victims and the inconvenience it involves, there is scarcely one which so urgently demands the attention of the practitioner as the prevention and treatment of ulcerated extremities. The fact that the author of the volume before us has himself treated about 1000 cases, and that more than 1500* annually present themselves at the central Bureau of Paris, are sufficient proofs of their universal importance, while the portion of our population peculiarly affected, with the nature of the treatment, the disgust it too frequently occasions, and the serious inconvenience arising from this class of patients to our public hospitals, render all efforts tending to mitigate or remove these evils deserving of approbation, and, if supported by the evidence of facts, entitled to our most serious attention.

Mr. Spender, from a review of 1000 cases, thinks himself justified in stating that the greatly preponderating cause of ulcers in the lower extremities is a varicose state of the veins, which precedes the ulceration, and without the presence of which the great majority of ulcers would not exist. This condition of the venous system has not been overlooked by authors on the subject of ulcers, but by none has it been given the prominent place assigned it by Mr. S.; and in no treatise that we are aware of has it more than partially influenced either the classification or treatment. It has been generally described as a result of the ulcer, or an accidental complication, and by all as a condition acting unfavourably on our prognosis, protracting the treatment and increasing the liability to a recurrence of the disease. It has also been viewed as almost confined to a particular vein, and the effects on the larger branches have principally arrested attention. Mr. S., on the other hand, thinks that the varicose veins almost invariably precede the ulceration, that they are by no means limited to the larger vessels, or to the part of the limb where the ulceration occurs, that it is on this positive and defined condition of the structure of the leg that the majority of ulcers depend, that the presence or absence of varicose veins forms the only safe grounds of classification, while

* 2 An. d'Hyg. les Publique. Dec. 1830. Parent du Chatelet, on the causes of ulcerated extremities.

It is the leading indication for our remedial measures.

We do not intend at present occupying our time in discussing the cause of this condition of the veins, feeling satisfied that the materials necessary to arrive at any satisfactory conclusions are not yet in our possession: we have hitherto been too easily satisfied by ascribing it to the position of the legs, and the obstacles thus opposed to the venous circulation, forgetting that these are natural conditions, and consequently provided for in the structure of the parts, while at the same time we must not forget that disease may arise from the abuse of a natural condition, (as too long standing, &c.) as well as from causes foreign to the normal functions of our organs. M. Parent du Chatelet, in a laborious and interesting analysis of 3373 cases, from the incomplete nature of his materials, was unable to arrive at any satisfactory conclusions as to the causes of ulcers in the legs, though he was enabled to deduce the negative results, that neither the vertical position, nor exposure to heat, cold, or moisture, exerted any evident influence either on the production or character of ulcers of the lower extremities. Out of 600 workmen (*débardeurs*) who spend the greater part of every day with their legs immersed in water, he only met with a single example, and that not a severe one. In many occupations involving a standing position ulcerated legs were frequent, but among others subject to the same physical conditions no such liability could be discovered; it is evident therefore that some other aiding or essential condition must be present to which this liability or exemption might be attributed. M. Parent attributes it to the relative exposure to external violence: this is also the opinion of the author, with the essential condition, that ulcerations which follow the action of external causes, depend on an antecedent varicose condition of the veins.

The external characters of ulcers have hitherto invariably, and almost exclusively, formed the basis of their classification, and much ingenuity has been expended in establishing characters for their distinction, and the adjustment of remedies applicable to their varied conditions. The very terms of irritable and indolent include opposite methods of treatment, and the discrimination of the pathological refinements necessary for the diagnosis of particular ulcers, with the selection of appropriate remedies, is frequently difficult and seldom satisfactory.

Whatever simplifies, either in pathology or treatment, facilitates success, and Mr. Spender's views at least possess the merit of being easily understood and easily followed out in practice. There is no constant relation between a cause and a pathological effect, the latter varies with the constitutional peculiarities of each individual, and on the same grounds the external characters of ulcers

may vary, while the essential pathological condition on which they depend may be identical. The author has found that the irritable and indolent, the exuberant and callous ulcers, with all their intermediate varieties, are, in the majority of instances, equally to be traced to a varicose condition of the veins, and that they yield with nearly equal facility to the same remedial measures; he therefore considers their external characters of very secondary importance, directing his treatment almost exclusively against the morbid condition of the vascular system, founding a favourable prognosis on what has hitherto been regarded the great obstacle to success.

He divides ulcers into the varicose and non-varicose, associating this condition with either their local or constitutional peculiarities, as irritable varicose, indolent varicose, venereal varicose, &c., making it at the same time the basis of treatment, not excluding the use of internal remedies, when distinct indications for their administration are present.

The following view of 100 cases contains an average proportion of the varicose and non-varicose ulcers which have fallen under the author's inspection.

79 Varicose; out of these there were 41 simple, 27 very irritable, 11 very indolent.

21 Non Varicose; out of these there were 15 simple, 4 very irritable, 2 very indolent.

	Females.	Males.
Of the whole number	68	32
Of the 79 varicose	59	20
Of the 21 non varicose	9	12

In the second chapter the author discusses with much soundness and ability the general principles of treatment. They are two. 1st. *Imitating a natural process.* 2dly. *Introducing a healthy action.* The natural process of cure for all abraded surfaces is the formation of a scab, by which the healing process is protected until the structure is so far restored that its presence becomes unnecessary: it then falls off. The author seeing no sound reason for our deviating so widely from the process of nature in the treatment of ulcers, while we adhere to it under many other circumstances, directed his attention to the discovery of some artificial application which might imitate in its action the natural scab, or at least facilitate its formation. After numerous trials, and some unsuccessful attempts, he found the desideratum in an ointment composed of lard and prepared chalk, the latter in much larger proportions than what is indicated in our pharmacopœias. It forms a gradual incrustation over the surface of the ulcer, is mild and safe in its application, neutralizes the acrid nature of the discharge, diminishes the necessity for frequent dressings, and in only two or three instances out of several hundred cases failed to give great and immediate relief. The injudiciousness of interfering with the process of cure nature tends to establish, the in-

tility, with few exceptions, of irritating escharotic applications, and the injurious effects of poultices, fomentations, vapours, washings, wipings, spungings, &c., are forcibly animadverted upon. Nature to be conquered must be submitted to, and there is no doubt that we often frustrate the ends we have in view by our numerous and complex remedies. Accomplishing the second indication is of still more importance in the author's estimation than the first, since we may in vain expect any permanent success to follow our local treatment, while the morbid condition on which the disease depends is suffered to remain. As already stated, this condition Mr. S. considers to be a varicose state of the veins. The remedy he proposes is the employment of a powerful and well adjusted compression of the limb. After the treatises of Barton, Underwood, Whately, and others, it would be absurd to bring forward the use of compression in ulcerated extremities as a novelty; the author seems quite aware of this, and simply endeavours to prove that the cases to which it is applicable are far more numerous than has been generally supposed; that its beneficial effects result much more from its general action upon the morbidly modified structures of the limb, than upon the ulcer locally; and in the third chapter, enters minutely into those details necessary to be attended to in its individual application. Many may be disappointed by the absence of striking novelty, and annoyed by the minuteness of the details—but we believe by the practical man, they will be read with interest and advantage. However faulty or vitiated the ulcer may appear, Mr. S. has very rarely recourse to any local or external corrective, but commences by applying the chalk ointment and bandage, a healthy state of the sore soon following the improved condition of the general structures of the limb.

Another important and valuable feature in the treatment proposed by Mr. S. is the avoidance of rest and a horizontal posture, "which have been looked upon," says Mr. Bell, "by almost all practitioners, both ancient and modern, as absolutely necessary for the cure of ulcers in the lower extremities." The inconvenience and often ruin attending confinement to bed among the class of patients most frequently affected, need no comment, and any method by which they may be avoided, possesses on this ground alone powerful claims to our attention. The author feels authorized in saying that "every ulcer (with the single exception where active inflammation exists in the limb) ought to be cured without sending the patient to bed." Rest, according to Mr. S. is positively prejudicial, not only protracting the cure, but greatly increasing the liability to a recurrence of the disease; for it needs no argument to prove that a cicatrix completed while the limb is subjected to its natural motions, presents far greater probability of continu-

ance than one formed under opposite circumstances.

The third chapter is devoted to the particular applications of the principles to individual instances, and contains a clear and practical exposition of the details necessary to be observed by those who would submit the treatment proposed to a fair and unprejudiced trial. The simplicity of the author's treatment will not prove ungrateful at least to the young practitioner; and if he differs with the objections advanced against the more complicated remedies usually employed, he may suspect from the amount of the author's experience, that at least in a great many instances they may be dispensed with.

In cases of the irritable, spungy kind of ulceration, accompanied with great enlargement, and a puffy state of the limb, with an extensive superficial ulceration, and a thin glairy discharge, the treatment proposed appears to have been peculiarly successful. In four cases, one of fourteen, another eight years' duration, the limbs were in a short time reduced to their natural size, the ulcerations were healed, and a healthy state of the skin produced. All had been previously treated by rest, poultices, and fomentations.

Exceptional cases are not overlooked. They are comparatively few in number, and their treatment is rather a modification than an abandonment of the preceding.

In the fourth and last chapter, the question as to the propriety and safety of healing ulcers of the legs is clearly and judiciously discussed. The considerations advanced may tend to remove many of those humoral prejudices which have so frequently obscured this often-debated question.

We have thus as briefly as possible endeavoured to make the reader acquainted with the prominent features of Mr. Spender's little volume, purposely avoiding any speculative considerations as to the truth or fallacy of the general principles it advocates, believing with the author, that they are of secondary importance to the question of—Has the plan been found practically useful? The answer to this is the amount of the author's experience; it is at least as great as that advanced in any other treatise upon the subject, and amply sufficient to entitle the volume to the attention of every practical man. That the treatment differs from that usually enjoined is sufficiently proved by the fact, that ulcerated legs may be found in all our general hospitals, which would not be the case were the author's principles practically enforced. That it differs in many respects from that inculcated in our standard works upon the subject, both in its details and extent of application, every impartial reader will admit; and we would remark that at the present moment our researches in medicine are not so much directed to the discovery of what is unknown as to the successful application of

the knowledge already in our possession; and merit should be tested rather than by the amount of success obtained than by the degree of novelty which may be attached to the means we have employed.

[A review of Mr. Spender's work has appeared in a contemporary journal. We hope it deserves no worse imputation than that of being glaringly partial and superficial. The author apprehends it will not be read by the *scientific* portion of the profession; we believe it will, with the exception of that part of which he is the representative.]

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The London Medical

AND

Surgical Journal.

Saturday, April 11th, 1835.

HOSPITALS SHOULD BE NATIONAL INSTITUTIONS.

IN our last number we pointed out some of the evils which arise from our hospitals being private institutions, and not under the auspices of government. In this country the wealth, generosity, and enterprise, of one or more individuals, has, in many instances, superseded the exertions of the legislature, but without adequately supplying their place: hence our defective hospitals, our joint-stock university, and many other institutions, which, although they reflect credit on the public spirit of their projectors, very poorly supply the place of the grand national foundations which ought to adorn the wealthiest and most powerful country on earth.

All the evils which we lately descanted on will continue to obstruct the progress of medical science among us, till our hospitals are under the protection and control of the legislature—and, we may add, till the medical officers cease to have any connection with them except in their *medical* capacity. It should, we conceive, be an axiom with reference to institutions of this kind, that no doctor should have anything to do with them except to treat the cases, to superintend the medical arrangements, and to instruct the pupils. From the neglect of this precept the greater part of our medical charities have become *doctors' jobs*

—as the public will find out when it comes to know a little more about these matters.

So great a change in the hospital system as that here contemplated, would not be brought about without some difficulty. Possibly, however, those interested in the hospitals now existing might be brought to perceive the expediency of placing them on a broader and more liberal basis; and if not, what is there to hinder the foundation of new hospitals on an improved principle? No doubt it would be attended with some expense, but certainly none worth weighing for a moment against the great public benefits that would arise from it.

The past history of this country has afforded ample proof that we can squander millions to prosecute an unjust war, or execute a foolish treaty; and there is present evidence that a great deal of money may be spent to build a palace little fit for the abode of royalty: surely then to found a few hospitals, and place them on the same footing as those in other civilized countries, would not occasion any very unreasonable demand on the public purse. These notions of ours may be considered by many as extremely wild, but like some other alleged extravagances they will inevitably become matters of fact in the progress of national improvement. To those who regard some of our views as chimerical, we would just suggest, by way of answer, that what is *done* in France or Prussia cannot be *impossible* in England.

We would seriously recommend this subject to the attention of the legislature and the profession, at a time when an improved era of medicine seems to be dawning on us; and we repeat our conviction, that no system of medical legislation will be either beneficial or permanent, without the existence of national hospitals. How far the institutions now in being may be made the basis of such hospitals, we cannot pretend to determine.

A KICK FOR THE GREEN LIZARD.

A DISREPUTABLE print, which, from its verdant hue, and reptile propensities, we shall denominate the GREEN LIZARD, has done a splutter which it calls giving us "a hint," in return for which civility we shall give it a kick. The thing actually accuses us of telling lies of it! Now this reptile is well known to all versed in herpetology, to have been hatched by the incubation of Sir Benjamin, and Sir Hal, who, resolving to set up something or other to oppose the "inconvenient" journal, unshelled this miserable animal, and condemned it to eat dust under their feet all the days of its life. For some time it very dutifully fulfilled its function; but at last the astute reptile, perceiving that the naughty baronets were regularly floored by the *Lancet* and *Us*, turned short on them, and being naturally stingless, did at least what it could to testify its dislike, by waddling over them backwards as they lay on the ground, flourishing its tongue, twirling its tail, and affording every manifestation of puny malevolence. For the plain statement of the facts here allegorised to render them less disgusting in the repetition, we are accused of traducing our contemporary. Now, although we have said nothing but the truth, we are afraid our conclusions may have been uncharitable—we may have mistaken the results of imbecility for those of treachery. It is possible that the obscure scribe, to us wholly unknown, who conducts this most dishonest hebdomadal, may latterly have sunk into the state of senile fatuity, which prior indications have frequently pointed to—that, having dissipated what brains he had, he now entirely forgets all that he has formerly said or done, and presents the melancholy spectacle of a bewildered wretch, drivelling, with aimless malice, against those from whom he has earned and received the wages of infamy. Lies! And does

our contemporary really think that we would be at the trouble, to say nothing of the wickedness, of inventing lies to injure so poor a thing as the Green Lizard, which, having been crushed and trampled on by the *Lancet* till it has lost even the power of crawling, is carried on a pole by an eminent bookseller* with his advertisements inscribed on its lank sides? No no—we say with uncle Toby "Go thy ways, poor devil, there is room enough in the world both for thee and us." And our contemporary is a nice mild creature after all—he is loth to harm us; he says he will not "break a moth upon the wheel;" yet notwithstanding his benignity we should be very sorry to be moths within the reach of so insectivorous a reptile as the Green Lizard, and as for wheels, the dexterity of our friend at *wheeling* is unequalled; it is one of those accomplishments in which we never hope to rival him. Really, though, we are very glad our contemporary does not mean to slay us, it would be so very terrible if he did!

A word about our following in the path of the *Lancet*. The obscure scribe has the stupidity to bring this as an accusation against us. The idiot! We glory in following the *Lancet*. Of the personalities of that journal we always entirely disapproved, unlike our green contemporary, whose personalities have been quite as coarse, though rather less witty than those of the *Lancet*, and tinged with a malignity from which the latter is free; but in all other respects we sincerely venerate the *Lancet* as the honest, fearless, and powerful advocate of the rights of the profession. We feel it but justice to declare, that if we had not followed the *Lancet*, this journal would never have been what it now is, the most influential of the medical periodicals. The Green Lizard has also *followed* the *Lancet*, but in a dif-

* We hope that no bookseller will suppose that we mean by this allusion the smallest disrespect to him.

ferent fashion—ignominiously dragged at its chariot wheels.

Our pitiful and unknown adversary is reduced to beg that we will not conceive he is afraid of us. He is afraid of us; for although in general an egregious ass, he has always evinced an admirable instinct of self-preservation, and knows too well the difference between his own calibre and ours to enter willingly into a contest with us. The effort with which, after many throes, he has stammered out "the blockhead," is truly ludicrous; it puts us in mind of an Irishman who spat his *own* head out at his mouth in a violent fit of coughing.

Our contemporary may calm his fears, there will be no contest. With *respectable* journalists we shall never decline a tilt when the occasion demands it, though we would always rather cultivate a good understanding with them; but with sordid scribes, unknown to us but as the hirelings of corruption, we cannot enter the lists. We shall never again mention the Green Lizard in our leader, except, as heretofore, to animadvert, in passing, upon its falsehoods, tergiversations, or absurdities.

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ELECTRO-TERPATHY, A NEW MEDICAL DOCTRINE.

Our readers may have smiled at the homœopathic reveries of Hahneman, but they will not do so less at the electro-terpathy to which a M. Bachoué* stands the father. The bantling is developed in 4 vols. 8vo.—a strapping child to carry about. We only undertake to present it's marrow.

Electro-terpathy then comprehends six curative methods, all which are founded on the organic *terpathic* law, (from *ter* three and *pathos* affection), a law discovered by M. Bachoué himself. These curative methods are:—

1. The *fluxipede* method, by which the

humours are withdrawn from the head, the eyes, the ears, the throat, arms and chest.

2. The *fluxiscope*, to withdraw them from the legs, the bladder, genital organs, womb, kidneys, bowels, liver, spleen and stomach.

3. The *insecticide* method, to destroy all the germs, or insects, retained in the vessels.

4. The *physipurge*, or *pulsipore*, to augment the flow of the sweat, urine, and fæces, in the proportions intended by nature, and thus to purge the body by every outlet.

5. The *electrogene* method, to rouse the sensibility and contractility in paralysis, debility, and the various chronic and atonic congestions.

6. The *delectic* method, to dilute the saline materials of the blood, and thus to diminish the excess of sensibility, of heat, and contractility.

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DUPUYTREN'S CLINICAL CHAIR.

THE chair of clinical surgery, rendered vacant by the death of Dupuytren, is not to be filled by concours until the 2nd of January, 1836, thus leaving it vacant nearly a whole year.

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EPIDEMIC TYPHUS IN PARIS.

A TYPHOID fever is prevalent to a great extent in Paris at this time, chiefly among the students of medicine, and labourers newly arrived from the country. Petechiæ of the trunk and extremities, and parotid swellings, sometimes of good, at others of bad augury, are attendant symptoms.

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PRESIDENCY OF THE ROYAL MEDICO-CHIRURGICAL SOCIETY.

To the Editor of the Original London Medical and Surgical Journal.

SIR—The enclosed is a copy of a letter addressed to the editor of the *Lancet* in contradiction to certain calumnies, quasi editorial statements, lately published in that journal (No. 27, for March 21), respecting the Council of the Royal Medical and Chirurgical Society. As a known and personally cognizant witness for the defence, I had in justice and usage a right to expect the immediate publication of my version of the matter. To my surprise, however, the editor, instead of having at once inserted my letter (which was properly authenticated) as he was in my opinion bound to do, has favoured me with,

* Of Vialée in the Department of the Basses (Pyrenées.)

but a promise of publication, and that conditional, viz., provided I shall *distinctly answer six queries* which he proposes; and which are, I may remark, so ingeniously contrived as to keep quite clear of the question at issue, and leave the statements of my letter substantially undisputed; queries, in fact to which I might return six such answers as the editor seems to wish for, without, in any material point, so far as I can see, contradicting my previous averments or confirming his own. Having no means then of compelling the Minors of Essex-street to deviate from the practice of other criminal judges, by admitting pleadings in defence, I have no other alternative than an appeal to a more impartial tribunal.

Under such circumstances, I take the liberty of requesting the insertion of this and its accompanying enclosure in your next Number, and remain,

Sir,

Your obedient Servant,

F. R. M. C. S. L.

To the Editor of the Lancet.

SIR—Your last number contains an article headed, "*Royal Medical and Chirurgical Society*," in which I find the following statements expressed or implied. Viz. 1. That the gentleman who now graces the chair of that Society, is in point of standing, as a member or fellow, next in seniority amongst the surgeons after the last surgical president, Mr. Lawrence. 2. That as senior surgeon fellow, he was entitled and elected accordingly, to the chair on the last vacancy. 3. That a certain piece of "*information reached his ears by a side wind*," i. e. by some non-official or indirect channel. 4. That the council, to extricate themselves from some difficulty, persuaded a particular candidate for the chair to withdraw his pretensions. 5. That the differences of opinion regarding "the presidential question" (to borrow from brother Jonathan) originated in secret and *menial* intrigues in the Society. 6. That the election to the presidency of the Royal Medical and Chirurgical Society takes place according to some "*Rota*."

Now I am not so fastidious, nor, I am sure, is any one of the gentlemen by implication or otherwise censured in your article, so fastidious, as to object to any of your correspondents "*Killing the enemy*," by romancing about the "*Royal Medical and Chirurgical Society*," or any fellow or section of its fellows, provided only he limit the excursions of his fancy to the regions of good feeling, and fair play. But I cannot but protest against statements like those in question,

some of which are mischievous in tendency and apparent design, and all of which are false, both in spirit and in substance.

1. The present president was *not* next in rotation or seniority. 2. He was *not* elected on account of seniority, but on account of weightier considerations, viz. talent, services, &c. 3. *Did not* obtain a certain piece of *information by a side wind*, but by official announcement to himself in person. 4. No candidate for the chair withdrew his pretensions at the solicitation of the council; nor was the candidate you named as "*persuaded*," so solicited to withdraw his pretensions. 5. The differences of opinion regarding "the Presidential Question" did not originate in any negotiations, dark, irregular, or improper, i. e. in *intrigues*. 6. There is no "*Rota*," seniority confers no right to the chair, and on the last occasion, as in most former anniversary elections, there has been a "*passing over*." Your informant has, therefore, whether ignorantly only, or maliciously matters not, misled you into the publication of statements, offensive and untrue, and possibly, also injurious, and I expect from your candour, that having unknowingly published such false statements, you will not hesitate to give the earliest and fullest publicity to the opposite, which are the true.

I have the honour to be, Sir,

London,

Your very obedient,

March 21, 1835.

F. R. M. C. S. L.

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MEDICAL APPRENTICESHIPS.

To the Editor of the Original London Medical and Surgical Journal.

"Cui bono?"

It has been argued by the opponents of medical reform, that many of the alterations which have been suggested, would tend to lessen the respectability of the profession in the eyes of the community, that the present system has advantages which no other could give—in short, that it is a "*pattern of excellent virtue*." What do such men say to the present system of medical apprenticeships? They tell us it is necessary as a preliminary process of education—let us inquire.

The laws of the Company of Apothecaries, require that every candidate for an examination, shall have served a five years' apprenticeship to a member or licentiate of the Company; or, in other words, that five of the best years of youth shall be devoted to the mechanical compounding of medicines, the drudgery of bottle-dusting, and almost solitary confinement, for such are apprenticeships in general, or when even different from that, the difference is not for the better. Exceptions are there to every rule, but very few are they with regard to

this one. We shall not palter about trifles, but there is something so hostile to the liberal feeling of young men in a liberal profession, and very naturally so, to the wording of the indenture of apprenticeship, making them as it does, bounden slaves to an individual, and his family—to obey them, to serve them; and, for this “poor privilege,” he must pay 40*l.* per annum, and go through the various duties of medicine compounder, bottle washer, &c. In consideration of which, the indenture specifies that the master shall instruct the pupil in the mysteries of his art; but, does he do this? does he instruct his (so called) pupil even in the elements of medical science? does he teach him the first outlines of Pharmacy, Chemistry, or *Materia Medica*? No! the whole extent of the knowledge acquired by the medical apprentice, is the dispensing of medicines to the various patients of his master, without knowing for what disease they are used. Even, indeed, should he have to perform the minor operations of surgery, such as venesection, he is ignorant of the relative situation of parts, he knows the danger he runs of wounding the neighbouring artery; but he knows not its situation. He has never heard a lecture on Anatomy; probably never seen a subject; then how can he be competent to perform an operation, which, because it is so common, is erroneously considered as so simple? Is this a reason for the continuance of apprenticeships? If I am to judge of the generality of apprenticeships from my own, and I believe they are generally similar, I could point out other and equally important errors in the system.

The practitioner to whom I was apprenticed, had not a large practice; but he had two public appointments, this, of course, added to the duties of the apprentice, for there was no assistant, and I was alone. Sometimes upwards of twenty patients a-day required advice in the absence of the principal, and I was obliged to assume the *gravitas in modo*, and prescribe, without having the slightest knowledge of the treatment of disease, and without having anything more than a confused idea of the doses of the various medicines. Thus was I frequently, unintentionally, committing errors. My governor was quite a Hamilton, with respect to purgation, and keeping the bowels open, he thought was the main duty of this life, and the calomel pill, and the purgative powder, stood my friends, I fear, too often; but, what could I do? I was told there could be no harm done by purgatives. I fear, my governor did not practise the other half of Hamilton’s prescribed duty, or he never would have ordered me to treat disease; for is not the master answerable for the deeds of his servant?—This evil may not be so prevalent in all cases where an apprentice resides; but in

the greater number of instances the poor are treated by him, or those patients who may come in the master’s absence. Does this tend to raise the character of the profession? Is this another reason why apprenticeships should be continued?

I will not deny, that in some “few and far between” instances, medical men instruct their apprentices, but how rare! the hurry, the fatigue, the anxiety of the life of the medical practitioner, can scarce give him time for the necessary duties of life, and he cannot find leisure for the instruction of his apprentices; but he generally considers they do their duty, if they keep the shop and the dispensary in order, dust the bottles, dispense the medicines, and rise early in the morning! And that his duty is performed, if he finds a quantum suff. of wholesome food. But, let me ask, what is the use of apprenticeship? what is its intention? If a “man must serve his time to every trade,” it is naturally supposed, that he shall have a perfect knowledge of that trade, at the expiration of his apprenticeship: Is it so, in the medical profession? No! it is rather a retarding than an accelerating of knowledge; and from the constant confinement, is no less prejudicial to the body, than to the mind. Five years spent in the mechanical drudgery of compounding medicines, is five years lost in the life of an individual; at that time of life too the most important, the most necessary, to be spent to advantage, to acquire that so necessary to a medical practitioner,

“*Mens sana in corpore sano.*”

If it be so great an evil, and few will deny it, save those who have an interest in things remaining as they are; let us ask, how so bad a practice originated, and that question we may easily answer. Every body knows the Apothecaries’ Company was established by a set of men as profoundly ignorant of medical science, as their successors are now frightened at the mention of the word “Reform!” Every body knows this set of men was selected from the old trading druggists, and the so-called, apothecaries, of the last century, men who had “served their time” to the trade, and acquired all they knew during their apprenticeship; what the extent of that knowledge could have been, I shall not decide, but I should think the master and apprentice were about equal. “*Arcades ambo!*”—that being men of trade, and not of science, they thought a knowledge of the compounding of medicines, and its doses, sufficient for them to practise, on hiding their ignorance, under a quaintness of dress, and a pompousness of speech, which passed with the multitude for wisdom;

“And their words of learned length and thundering sound,

Amazed the wondering patients ranged around.”

Such were the men who had to frame the laws of the Company of Apothecaries;—such were the men who had to give guidance as it were to medical politics; fettered as they were by old prejudices, and swayed by personal interests, they made a seven years' apprenticeship a necessary requisite for a member's diploma. They could not forget that they had "served their time" behind a counter, and the "march of intellect" had not taught them liberality of feeling, or enlargement of views, of "good or evil;" they had worshipped at the shrine of bigotry and ignorance, and they would keep their successors in the same faith, if they could. But the day of Medical Reform is dawning, the opposers of that great advent are already trembling to their fall, and soon the unjust laws that now regulate apprenticeships will be of yesterday, and we may exclaim with joyfulness, "Fuit Ilium!"

J. F. C.

Hospital Reports.

WESTMINSTER HOSPITAL.

Medullary Sarcoma of the Neck.

WILLIAM DOWSETT, aged 73, was admitted February 24th into Burdett Ward, under the care of Mr. Guthrie. His residence has been at Epping, where he worked as a blacksmith, and enjoyed perfect health until about seven months ago; at which period he perceived a small but hard lump in the neck, situated, according to his description, just behind the posterior margin of the sterno-cleido mastoideus muscle, and about two inches below the mastoid process of the temporal bone. As far as he recollects, at this period the tumour was not moveable.

It did not at first attract much of his attention, until, beginning to increase rapidly in magnitude, he consulted Mr. Mac Nab, of Epping, respecting it; and after having been some time under that gentleman's care, he procured his admission into the Westminster Hospital. At present the tumour has attained a very considerable magnitude, being at least as large as the human fist, and extending downwards, from between the mastoid process and angle of the jaw, and encroaching anteriorly upon the summit of the neck in the direction of the base of the inferior maxilla. It is lobulated, scarcely in the least degree moveable, is covered by integuments of a deeply livid or reddish-purple hue, through which may be seen numerous veins in the subcutaneous cellular tissue, ramifying upon its surface. It is the seat of paroxysms of pain, of an acute lancinating kind, which are either induced or aggravated by coughing. During the last four or five weeks, deglutition has been somewhat impeded, from the progressive encroachment of the tumour upon the pharynx; and this is noticed more par-

ticularly in the deglutition of bread. He states, that since he has been the subject of this disease, he has lost four or five stone in weight, and that he has become proportionably feeble. The tongue is covered with a whitish coat of fur, the bowels are open, and appetite good; the pulse 96 and feeble.

28th. To-day the patient was brought into the operating theatre, in order that the surgeons might severally examine him, and consult on his case. Mr. Guthrie stated, that had the patient been a younger man, say ten years younger, he should not have hesitated in proposing an operation for its removal, as affording a chance of prolonging his days, but that at the age of 73 he could not entertain the idea. Sir A. Carlisle thought an operation quite out of the question, as, from the rapid progress of the tumour, it was evidently of a highly malignant kind, and would in all probability return in the event of the operation being successful, which, however, from the peculiar locality of the tumour, was highly problematical. Mr. White and Mr. W. B. Lynn having been called away from the theatre, did not openly express their opinions on the case; this, however, was perhaps unnecessary, as it appeared that the patient had already made up his mind not to undergo any operation. Mr. Guthrie observed, that it was advantageous to have even irremediable cases of this description in the hospital, as it afforded them an opportunity of studying the course of diseases, which might not otherwise come under their observation.

March 21st.—The tumour continues to increase in size, extending in front of the ear, on to the surface of the cheek, and below the jaw towards the submaxillary gland. The difficulty of deglutition increases.

26th.—Having requested to be allowed to return home, he was yesterday discharged, as "incurable."

MIDDLESEX HOSPITAL.

Fistula in Perineo, after Lithotomy—Operation.

APRIL 1st.—A boy, aged twelve years, had a calculus removed from his bladder, by the ordinary lateral operation, when about six years of age; and the wound in the perineum, having never entirely healed, has left a fistulous opening between the bulb of the urethra and the anus, which communicating with the bladder, permits the urine, when the patient is in the erect position, constantly to dribble away, which producing excoriation of the nates, thighs, &c., is a source of great irritation and annoyance.

With the view of obtaining him relief, his father had procured his admission both into the Westminster and St. George's Hospitals, where a variety of measures were tried with-

out success. Amongst these may be particularized—the recumbent position with a catheter in the urethra, and the application of the potential and actual cauteries to the opening of the fistula.

Under these circumstances, Mr. Mayo determined to try the plan of laying open the fistula from its external opening to its commencement in the bladder.

The boy having been placed in the same position, and secured in the same manner as in the operation of lithotomy, Mr. Mayo followed almost precisely the usual steps of that operation. A staff was introduced through the urethra into the bladder, and a director passed into the fistula, which was then carefully laid open by means of a probe-pointed bistoury. An elastic-gum catheter was then passed into the fistula thus laid open, where it is to be allowed to remain in order to excite the wound to granulate; after which the patient was conveyed to a bed in one of the wards.

Necrosis of the Tibia—Operation.

A youth, aged seventeen, was next brought into the theatre, in order to have the sequestrum removed from the head of the left tibia, which has for some time been in a necrosed state. A longitudinal incision, about two and a half inches in length, was made through the integuments, and the surface of the diseased bone exposed. Mr. Mayo now proceeded to apply the trephine, and a circular piece of new bone was thus removed, and by the fresh application of the trephine, a fresh segment of bone was taken away, by which means the opening was enlarged. The sequestrum thus exposed, was, after the use of a variety of forceps, and not without considerable labour, extracted in three or four portions.

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NORTH LONDON HOSPITAL.

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Rhinoplastic Operation.

JANE CAMPBELL, aged 19, admitted January 26, under the care of Mr. Liston. She labours under very great deformity, from complete destruction of the nose, as high up as the nasal bones. The loss of substance was the effect of intractable ulceration, which commenced about five years ago, without any known cause. The ulceration, which commenced on the right cheek and affected successively the nose and left cheek, proceeded in defiance of a variety of treatment for about three years, when it had effected the loss of substance as it at present exists; it then began to get well spontaneously and in a short time completely cicatrized. The patient being extremely anxious to get rid of the deformity, consented to submit to an operation.

On the day of her admission, the operation was performed in the following manner. The size of the flap, which it would be ne-

cessary to bring down from the forehead, was first measured with a piece of soft leather, and then, as it was expected the patient would be rather unsteady, was traced out with ink. The cicatrized edges where the cartilages of the nose formerly rested, were then paired off pretty deeply. The flap was next dissected down—its attachment to the root of the nose was left of proper thickness, so as to ensure a sufficient vascular supply. The incision on the left side, to which it was proposed to make the turn, was carried down a little lower than on the right, so as to facilitate the twisting.

After the bleeding had ceased, the flap was brought down, and retained in contact with the surface prepared for it, by two points of interrupted suture on either side.

The lower part of the wound on the forehead was also brought together by a single stitch, a little oiled lint was then placed in the nostrils, so as to support the flap. On the second day the sutures were removed, a strip of isinglass plaster having been first applied. Adhesion was found to have taken place all round.

Lint dipped in warm water and covered with oiled silk, to be applied to the wound in the forehead.

March 5th. A narrow bistoury was passed under the twisted portion, and its attachment with the forehead divided.

A thin wedge-shaped portion was removed, and the raw surfaces were brought together, and retained by three points of suture.

Mr. Liston said, this operation is generally required in this country, from the ravages produced by the abuse of mercury, or by the venereal disease. Sometimes the nose is lost as the consequence of exposure to violent cold, and from debility following fever.

The operation was practised considerably in the fifteenth century; and it is mentioned by writers at the commencement of the Christian era. In the fifteenth century, the flap was cut from the upper arm; you no doubt remember the facetious manner in which Butler, in his *Hudibras*, has spoken of the operation as practised by Tallicotius. A German surgeon lately practised the operation in the manner of the fifteenth century; he failed in the first case; but, thinking he might succeed by getting the parts into a more favourable state for adhesion, he cut through the integuments of the upper arm, put a seton through the flap, and allowed it to remain there for a short time: he then removed the flap to the nose, and it adhered; the operation was successful.

The operation as now practised, though variously modified, was introduced from India in 1795; where it had been practised for centuries; it is simple, more successful, and less painful to the patient. It is said the Indian operators used to pommel the in-

teguments for the new nose with a slipper, to excite the circulation, and produce thickening.

I have had to deal with patients in whom all the cavities of the nostrils was destroyed, producing much greater deformity than in the case before you. Shortly before leaving Edinburgh, I made a flap three times as large as in this one; you must always proportion the flap to the size of the ossa nasi. There are few points of suture necessary after the operation, provided the incision corresponds, and you do not pucker the parts; by a few points of suture you allow the free discharge of the matter, which I need scarcely say is of great importance. With regard to the various modes, I have practised the Indian one, but the form of their flap in general encroaches on the hairy scalp; it did so in the first case I had, and I could not produce union of the column. There is a great variety of opinion as to what form the flap should be of; that recommended by Delpech causes too much deformity.

I have frequently asked, "What do you make the bridge of?" Mr. Tyrrell, of St. Thomas's Hospital, has tried one made of platinum wire, but it came away in a very short time. He still, however, adheres to his opinion as to its usefulness. Now, in fact, there is no necessity for you to make an artificial bridge; the flap at first is exceedingly moveable, but after a time its under surface begins to granulate, and it then rests on the ruins of the old nose, becomes, as it were, part of it, is firm and consistent, and is endowed with sensibility.

Our patient, as you are aware, cannot yet make up her mind to submit to the completion of the operation—the column being still required. This part of the operation I have practised for years successfully in cases in which the column has been lost by ulceration: it consists in passing a sharp-pointed bistoury through the upper lip, about an eighth of an inch on one side of the medial line, close to the ruins of the old column: you will continue the incision downwards, straight to the free margin of the lip; a parallel incision is then made on

the opposite side of the medial line, and a flap is formed of skin, mucous membrane, and interposed substance: you then divide the frenulum, and remove the prolabium, and without twisting, fix the flap in its required position, by means of a sewing needle headed with wax, being passed through the apex of the nose and the extremity of the elevated flap. The edges of the lip may be brought together by twisted sutures. This part of the operation, instead of producing, generally prevents deformity—for you will always find the upper lip tumid and elongated after the loss of the column: you remove the deformity of the lip, and improve the nose, by the last-named stage of the operation.

I think I may claim this operation to myself: I proposed it twelve or fifteen years ago, in the case of a young gentleman whose septum narium and columna inflamed and ulcerated, in consequence of a blow.

With regard to the wound in the forehead of our patient, you will perceive it is not quite closed—there is a slight exfoliation of bone. this accident never occurred to me before, and will not now be attended with deformity.

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Diseases of the Lymphatics.

I HAVE ascertained, says M. Velpeau, that at least fifteen times out of twenty, the engorgement of lymphatic ganglions is preceded by some inflammation, or suppuration of some other point; that the glands of the neck, for instance, in scrofulous persons are swelled in consequence of some previous disease of the head or mouth: the swellings of the armpit are referable to similar causes, in the hand, arm, or chest; those of the groin, to some cause in the lower extremities or sexual organs, &c.

The practical deduction from this is, that, in children for instance, it is important to put a stop at once to any suppuration, to reduce every inflammation about the scalp or head, instead of leaving them, as is frequently done, when the patient is threatened with scrofula.—*Gazette des Hopitaux.*

WEEKLY METEOROLOGICAL JOURNAL.

1835.	Moon.	Thermom.			Barometer.		De Luc's Hygrometer		Winds.		Atmospheric Variations.		
Apr.													
2		54	65	54	29.63	29.51	51	50	S.S.E.	S.S.E.	Foggy	Fine	Fine
3		56	61	49	29.51	29.51	51	52	S.W.	S.W.	Fine	—	—
4		44	53	47	29.84	29.91	53	62	W.N.W.	S.S.W.	Rain	Rain	Rain
5		42	49	41	29.97	29.98	62	60	E.	E.	—	—	—
6	☾	46	51	43	30.01	30.11	60	55	E.	E.S.E.	Fine	Fine	Fine
7		44	59	44	30.14	30.14	55	50	S.E.	S.S.E.	—	—	—
8		52	63	49	30.07	30.00	50	59	S.S.W.	W.	—	—	—

THE London Medical and Surgical Journal.

No. 168.

SATURDAY, APRIL 18, 1835.

VOL. VII.

LECTURES ON MEDICAL JURISPRUDENCE,

DELIVERED BY PROFESSOR A. T. THOMSON,
F. L. S.,

At the University of London; Session 1834-35.

LECTURE XXV.

GENTLEMEN—In forming a prognosis of wounds, for medico-legal purposes, several circumstances besides the character of the wound itself are to be taken into account: as for instance the *age* of the patient. It is evident that as life advances, wounds become more hazardous, and are less likely to healowing to the diminished energy of the circulation, the obliteration of many of the minute vessels, and the general loss of tone which is peculiar to the latter years of life. The muscles become loose, flabby, and relaxed, consequently, the powers of healing and reparation of injury to those parts are diminished; life is altogether less stable than in youth, which rebounds as it were with an elastic force under the depression of injuries, whilst in the old, the lessened degree of vital power renders every injury a more or less permanent evil. Any thing exciting inflammation of the skin, particularly of the extremities, is apt to terminate in mortification in the old; thence, wounds which in themselves are trifling, in the young and middle-aged, become serious and mortal in the old. But besides the period of life, considerable difference exists in the original fabric of the body; some are born with vigorous constitutions, others with feeble; some are not affected by any thing, others are of the most excitable temperaments; in all of which, differences must necessarily take place in the issue of injuries; and thence, also, the necessity of attending to the constitution in forming a prognosis respecting wounds. In some instances, danger may arise from peculiarity of original structure: the heart may occupy the right side of the thorax; the stomach has been found below the umbilicus, whilst the bladder has been found above it. In the body of Smithers, who was hanged for

VOL. VII.

arson, which is preserved in the Museum of the University, you will find that every viscus, both of the thorax and the abdomen, is transposed. Thus a wound on the right side, in this man, would have penetrated the heart; or, if in the abdomen, one on the left side might have passed through the large lobe of the liver, wounded the gall bladder, or penetrated the pyloric portion of the stomach. These deviations render a person who is wounded more or less susceptible of danger than he would otherwise be; but, except in cases of premeditated murder, wounds becoming dangerous only from mal-position of parts must always be viewed in a point favourable to the accused, and the deviation accurately pointed out to the court by the medical witness, and the probable consequences of these, as they bear upon the case under consideration, made evident. In the case, which I had occasion to notice in my last lecture, of a boy having died from blows on the head from a small stick, no danger would have followed the blows but for a peculiarity in the bones of the head, which were remarkably thin and brittle; and consequently the accused had very properly the advantage of this deviation, and was acquitted.

Slight wounds are, also, sometimes rendered dangerous in persons extremely irritable; or, diseases may exist, which even independent of wounds or blows would have soon terminated fatally, and questions may thus arise whether death is to be ascribed to the wound or to the disease. Some persons have what is termed a hæmorrhagic constitution, so that, when even slight wounds are inflicted, they immediately become dangerous from the great loss of blood; or there may be variations in the ordinary distribution of blood-vessels, which may render slight wounds equally hazardous, as in persons with a hæmorrhagic constitution. The trade of the wounded person should not be overlooked in forming a prognosis of the probable consequences of wounds. A man receives a blow on the head, it is not much thought of; but after some days he is seized with vertigo, staggers, drops down, and dies. The blow is suspected to have been the

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cause of his death; the head is opened; a vessel is found ruptured, sufficient to account for his death, and the individual who struck the blow is arrested and put upon his trial, either for murder or manslaughter. The evidence that he struck the blow is clear; and he is about to be condemned. Now this person may be perfectly innocent. If the occupation of the deceased led him to lift heavy weights, and the vessels of the brain were in a brittle state, the temporary congestion in the head, owing to the retention of the breath which always accompanies efforts to raise great weights, would be likely to rupture a vessel, and the death of the individual have no connection whatsoever with the blow to which it had been attributed. That such a state of vessels as this occurs is well known; death from rupture of vessels in the brain may even arise from more obscure causes; and this fact displays the necessity of not forming an opinion in cases of the fatal result of supposed wounds or blows, without investigating closely, both the nature of the employment, and the state of health of the person who died.

Again, wounds in themselves not dangerous may bring on diseases in some vital organ, which may terminate fatally. Thus, inflammation of the lungs is not an unfrequent cause of death from wounds, and more especially of compound fracture: yet it would be far from just to condemn a man for inflicting a wound which might induce such an inflammation in one case, when a thousand of a similar description and as severe recover. In giving, therefore, an opinion as to the cause of death after the infliction of a wound, the lungs, as well as the wounded part, should be most carefully inspected; and, if indications of inflammation having recently existed there display themselves, the accused most undoubtedly ought to have the benefit of the observation. But even before death, you should be able to form a probable prognosis in cases of this description. Two men fight a duel, and one is hit in the arm so as to produce a compound fracture of both radius and ulna. His antagonist is arrested to await the issue of his wound; on the second day the inflammation assumes a dark colour, with a gleety discharge, and he becomes restless and irritable, with a quick pulse, and pain seizes him in the side; you may pronounce him in great danger, but not from the extent or nature of the wound, but from the state in which his system was when he received the wound. If he be, otherwise, in a weak and irritable state, the inflammatory attack may be veiled, and the practice adopted consequently feeble; the disease will run on and terminate in death. Dissection, in such cases, exhibits marks of recent inflammation in the lungs, coagulable lymph exuded, and not unfrequently purulent matter on the surface of the lungs,

or in the bronchial tubes. Besides, therefore, being cautious in forming a prognosis in such a case, the knowledge of this close connexion betwixt wounds and the lungs, should make us watchful of the first symptoms, the appearance of which will always be a guarantee for the most active practice.

Another consideration not to be overlooked in forming a prognosis of wounds, is the state of the weather and the site of the residence of the individual, in reference to its salubrity or insalubrity. Extreme of cold or heat, thunder storms, much rain, snow or hail, all increase the danger of wounds. An insalubrious atmosphere may render slight wounds dangerous, and dangerous ones mortal. A wounded man carried into an hospital where cases of gangrene are at the time, or into a hut near a dunghill where putrefying animal and vegetable matter is collected, or, in fact, in any place in which nitrogen, carbonic acid, and sulphuretted hydrogen, are present in any considerable quantity, cannot be expected to get well; thence a large proportion of the wounded patients of overcrowded hospitals die, not from the wounds, but of hospital gangrene; and, under such circumstances, Dr. Beck justly remarks, "It is the duty of the medical examiners to apply the maxim of Hippocrates, that every thing which happens to the injured person contrary to correct probability, does not belong to the essence of the disease." It must, however, be also kept in remembrance, that of the causes of death, in such a case, although the wound is the slightest, yet, it may have contributed materially towards the development of the others.

The last consideration to be attended to, in forming a prognosis of wounds, is one which I would most willingly throw a veil over—the want of skill or negligence of the surgeon in whose hands the wounded person may have fallen. Hæmorrhages that might have been suppressed in other hands, may prove fatal from ignorance of the mode of taking up vessels; collections of pus may not be evacuated when necessary; operations may be either neglected or improperly hurried, and imprudencies in diet may be permitted. A case of death arising from a tight bandage is detailed by Sir C. Bell, in his *Surgical Observations*. (See p. 294).

A most instructive case of the fatal effects of abuse in diet and regimen, even in recovery from severe wounds, is given by Dr. Hennen, in his *Military Surgery*, p. 353.

In cases of decided malpractice, no feeling of delicacy towards the surgeon should prevent from giving an opinion favourable to the author of the wound, and openly attributing the blame, if merited, to the surgeon. No medical man can stand excused for failing to make himself acquainted with every improvement in his profession, and to

apply it to the symptoms presented to his view; and then, if on examination the injury is found to be such that no effort of art could have prevented its fatality, the death of the patient may be justly attributed to the nature of the wound. On the contrary, the prompt attention to take advantage of every favourable occurrence sometimes happily saves life under the most threatening aspect of affairs. I have some hesitation in illustrating this remark by an anecdote of myself; but I am induced to forego the silence which I would otherwise maintain, by having observed the following note in p. 333 of Dr. Darwall's edition of Dr. Beck's *Elements of Medical Jurisprudence*: "There is one instance, and only one, of a divided carotid not proving fatal. In this instance, Mr. Carpue, of London, being called at the moment, secured the vessel."

(The lecturer here related a case of a gentleman who cut his throat in a shop at Knightsbridge).

Although the law of England looks to the intent, and little to the nature of the wound, in criminal cases of wounding, yet the enactment passed in the reign of James the First, which refers to the period within which a person, who has been wounded with a criminal intent, must die in order to constitute that act murder, is still in force. It declares, "That the thrusting or stabbing another, who has not a weapon drawn, or who hath not then first stricken the party stabbing, so that he die thereof within six months after," shall be adjudged murder, though done upon sudden provocation. The same provision, as to time, constitutes, also, part of the law of murder in other countries. The difficulty, in all cases, is to trace the death clearly and indisputably to the wound in question. It is well known that after serious wounds, from which the persons recover, the organs in the different cavities of the body have their disposition to disease very much increased; and causes which, in a state of health, would scarcely affect them, operate very powerfully. Thus, for example, a man receives a wound in the thorax, the slightest atmospheric changes affect the respiratory organs; some months after the wound is well, he catches cold on a slight exposure, inflammation ensues, and he dies. Another is wounded on the head, but recovers; before six months expire, he makes some violent effort, in lifting a heavy load, or he is transported into a violent paroxysm of anger, or commits an excess in drinking, phrenitis supervenes, and he also dies. In both these instances an advocate might contend that the death should be ascribed to the wounds, as, unless these had rendered the habit so susceptible of diseased impressions, the individuals in all probability would not have suffered. But it is not in this light that such cases are to be viewed by the surgeon, and he would ill perform his duty to consign the accused to punishment on such

grounds. On the other hand, in such a case as the following, and in many others of a similar nature, in other cavities, there can be no hesitation in tracing death to the wound, however long before the fatal issue takes place. "A ball entered the right eye of a French soldier, towards the great angle, and could not be traced. He himself deemed it of little consequence; and the wound healed under the common hospital treatment. Some weeks afterwards the man expressed a wish to leave the hospital, although cautioned by the surgeon, and had scarcely reached the door, when he was seized with rigors, obliged to return, and died two days afterwards. On dissection, the ball was found lodged under the sphenoid cells and the hole of the optic nerve." (Garangeot *Traité des Operations*, vol. iii, Obs. 20). As confident an opinion may be, also, delivered in cases in which pieces of cloth have been carried into the abdominal or thoracic cavity by bullets; and, being left there, have caused abscesses, which have afterwards terminated in death. But, perhaps, it is much safer in every case to look to the intent, whatever may be the consequences; thence the advantage of Lord Ellenborough's act, in removing many of the difficulties which crowded upon the surgeon in delivering evidence in courts of law, relative to such cases.

In instances of insurance upon lives, in which suicide is suspected or alleged, it is of much importance to ascertain the fact, as cases have occurred in which the wounds supposed to have been the cause of death, have been inflicted after death; and this has also been done with the view to conceal murder. A wound, however, received during life, either exhibits appearances of incipient inflammation, or it causes greater hæmorrhages than one made after death. In such cases, also, if any weapon be found near the deceased, we should ascertain whether that could possibly have inflicted the wound, or whether it has been placed there afterwards. Two cases of this description may be mentioned. The first is that of Sir Edmonsbury Godfrey, who had been strangled, and thrown into a ditch, where he was discovered with his own sword run through his body; but, as no blood issued from the wound, an inquiry was instituted, and the means by which he was killed ascertained. The second case is that of a man who was found shot, and his own pistol lying near him, from which circumstance it was concluded that he had destroyed himself; but, on examining the ball by which he was killed, it was discovered to be too large to have entered that pistol; in consequence of which, suspicion fell on the real murderer.

Such, Gentlemen, are all the remarks which I think necessary to be brought before you relative to wounds. With respect to *mutilations*, the law of England takes special notice of these under the term *mayhem*, a legal term for maiming. It is scarcely ne-

cessary to say that a *mutilation* comprehends both a wound and a permanent deformity or deprivation of some organ or part of the body, which weakens or destroys the functions of one or more parts. By the eye of the law it is viewed in the same light: "The term *mayhem*," says Judge Blackstone, "is the violently depriving another of the use of such of his members as may render him the less able in fighting either to defend himself or annoy his adversary. And, therefore, the cutting off or disabling, or weakening a man's hand or finger, or striking out his eye or fore tooth, or depriving him of those parts, the lac of which in animals abates their courage, are held to be *mayhems*. But the cutting off his ear or nose, or the like, are held to be *mayhems* at common law, because they do not weaken, but only disfigure him." But, nevertheless, castration was always held to be felony; and this, although the *mayhem* was committed upon the highest provocation; cutting out the tongue, putting out the eyes, slitting the nose, or cutting it off, were also afterwards, by an act of Charles II., declared felony without benefit of clergy. The number of acts under *Mayhem* are numerous. (See Russell, p. 585.)

In looking over this list of offences constituting *mayhem*, one is surprised to find so much value put upon the fore tooth at the early period at which the law was enacted: had the enactment occurred at a later time, after the use of the cartridge, for loading military muskets was introduced, we might understand the object, as a soldier is obliged to bite off the end of the cartridge before the powder can be discharged from it. It was not very honourable to the English law that it visited slitting the nose with the punishment of death, and permitted more serious wounds to be inflicted with impunity. So late as 1778, one Tickner was tried at the Old Bailey, under the Coventry Act, that enacted in the reign of Charles the Second, to

which I have alluded, for injury done to one William Jacob. There were several wounds, but the one which bore chiefly on the case, was a cut on the nose dividing the integuments in an oblique direction; the wound was slight, but sufficient to leave a visible mark for some time. The prisoner was convicted; but Serjeant Glynn ordered the execution to be respited until the opinion of the twelve judges could be procured, whether this conviction was proper within the meaning of the Coventry Act. The judges decided that the conviction was right; yet, fourteen years before this trial took place, one William Lee was tried for attempting to cut his wife's throat with a razor, while asleep. The wound was three inches in length and quite across, but did not prove mortal; this was held not to be an offence within the Coventry Act.

With regard to the law on the aggravation of injuries by injudicious treatment: it is sufficiently explicit respecting persons not qualified to practise surgery; but it is less so, respecting the malpractice of those who have been licensed as surgeons. It was anciently holden, that if a person, not duly authorized to be a physician or surgeon, undertake a cure and the patient die under his hands, he is guilty of felony. By a statute of the 23rd Henry the Eighth, the capital part of the charge was set aside, and it now only constitutes manslaughter. But the late trial of a notorious quack for the death of a young lady, which is too fresh in your memory to make it necessary for me to go into particulars, demonstrate to you the difficulty of substantiating charges of this description. Whether the public would sympathize with a regularly educated surgeon, in the same degree as it did with the notoriously ignorant pretender on that occasion, I will not take upon me to decide; but, for the honour of the profession, I trust the experiment may never be tried.

LECTURES

ON THE

INSTITUTIONS OF MEDICINE,

DELIVERED BY JOHN FLETCHER, M.D., F.R.C.S.E., AT THE ARGYLE SQUARE SCHOOL OF MEDICINE, EDINBURGH; SESSION 1834-35.

LECTURE XVIII.

Evidences of the Ganglionic System of Nerves being the true seat of Irritability.

THE question then recurs—Do the various movements, molecular or sensible, in the sum of which life consists, and the only generally acknowledged instrument of which, at least in the higher tribes of organized beings, is muscular fibre, whether insensible, as where it invests the capillary and erectile tissues, or sensible, as where it constitutes the obviously muscular organs, indicate that muscular fibre is the immediate seat of irritability; or may the impression of the stimulus, by which this fibre is excited to contraction, be presumed to be made first upon some part of the nervous system—which in this case must be

regarded as the immediate seat of this property—and communicated to the muscular tissue only secondarily (a)? That the nervous system—in the vague sense in which the term was formerly, and still unfortunately is too frequently employed—was the immediate seat of irritability—a property in so many respects analogous to irritability—had become firmly established among physiologists long before the existence of the latter as a distinct attribute of organized beings was suspected; and it was therefore natural that, upon the introduction of this new property, a local habitation should be assigned to it similar to that which the property so nearly allied to it had so long occupied. It was indeed at this time almost universally admitted, that the nervous system—by which term was then almost exclusively understood the cerebro-spinal department, was alone susceptible of vital impressions of any kind—that is to say of undergoing, upon the application of a stimulus, any change not strictly either chemical or mechanical—and that it was by means of this system alone that the effects of such changes were extended to the other parts of the body: but the opinion, however well founded with respect to sensibility, had hitherto no support, except that of analogy, in its extension to irritability (b). Some circumstances accordingly connected with the property of irritability soon began to attract attention, which were not easily reconcilable with the generally prevalent hypothesis. Independently of the circumstance that the proper cerebro-spinal nerves—which alone were then generally recognised—were too circumscribed in their immediate distribution to explain the communication by this means of a universally disseminated property, and of the obvious fact that all the functions of the body which consisted merely in irritation, or required for their exercise the property of irritability alone—in other words all the organic functions—continued uninterrupted during sleep, in comatose diseases, and even for some time after apparent death, in all which cases those nerves are to a greater or less degree in a state of inaction, it was soon proved by direct experiment, not only that a stimulus applied to all appearance directly to a muscle fibre, had the effect of exciting its contractions (c), but also that this susceptibility of contraction, or irritability, was not materially impaired by dividing the principal nerves with which it was furnished, by removing the brain, or even for some time by totally separating such muscle from the rest of the body; and further, that if the irritability of a muscle, the nerves of which had been de-

(a) It is assumed above that motion, insensible or sensible, is always a concomitant of irritation, and regarding irritation and life as synonymous terms, and life as consisting in a series of motions, such an assumption is unavoidable. It is by no means certain however, as will be more fully explained in future, that irritation, or the “perceptio” of Glisson, is always followed by motion of any kind, although it is by such motion alone that we are capable of recognizing its existence.

(b) Such was however the vague surmise of almost all the earliest authors upon this property, who, in their ignorance or carelessness of the plurality of the nervous system, while they expressed what is in all probability the truth when they referred irritability to this system, signified, at the same time, what is in all likelihood the most remote from it; since they meant in general, when they meant any thing definite, a department of this system which is perhaps as little allied to that which is really the immediate seat of irritability, as this latter is to the muscular, or any other system of the body. Of this stamp were, besides many of the authors already enumerated, in particular De Gorter, and Hoffman, Senac (*De la Struct. du Cœur*, 1749), and Whytt (*Physiol. Ess.* 1755); and the same doctrine has been maintained since the time of Haller, principally by De Haen (*De Sensib. et Irritab. Hum. Corp.* 1761); Unzer (*Erste Gründe einer Physiol.*, &c. 1771); Cullen (*Instit. of Physiol.* 1777); Scarpa (*De Nerv.*

Gangl. 1779); Monro (*On the Struct. and Funct. of the Nerv. Syst.* 1783); Schaffer, (*Ueber Sensibilitat. &c.* 1793); Prochaska (*De Carne Musculari*, 1798); Le Gallois, (*Sur la Principe de la Vie*, 1812); and some others. In this enumeration are included only those authors who have either expressed or signified that irritability is seated primarily in the cerebro-spinal system of nerves—or that which alone had, before the recognition of irritability as a distinct property, attracted any considerable attention—or if they have referred it to the ganglionic system, it is only in the idea that this constitutes merely an appendage to the former. If it is possible to agree with persons in fact, while we differ from them most materially in the words used to express that fact, it is equally so to agree with them in words—as when they refer irritability to the nervous system—and still differ from them *toto cœlo* in the fact implied.

(c) It was the observation of this fact, as already observed, which first led some certain physiologists who were predetermined that no other but the nervous tissue, in their sense of the word, *should* acknowledge a vital impression, to represent the muscles as merely an expansion of the cerebro-spinal nerves, and to class the two together under the name of “*Solidum Vivum*,” in contradistinction to the “*Solidum Mortuum*,” which included every other tissue of the body. Dr. Gregory, (*Conspect. Med. Theoret.* 1790), is very full and edifying on this subject.

stroyed were by any powerful stimulus—such as that of Galvanism—suddenly so far destroyed, as that it ceased to obey any stimulus whatever, it was after a time more or less perfectly restored. All this appeared to be quite inexplicable upon the hypothesis that irritability had its immediate seat in the nervous system, in the circumscribed sense at that time attached to this term, and led many physiologists to regard this property, unlike sensibility, as the immediate attribute of the muscular fibre (*a*). But objections soon presented themselves to this inference; and, among the rest, it became a problem, upon this presumption, why the heart and other organs which minister exclusively to the organic functions, and which are neither possessed of sensibility nor under the dominion of the will—the only two purposes, it was said, to which, if they are to be excluded from that of imparting irritability, nerves can be supposed to be subservient—should be supplied with nerves at all; and this problem was found so difficult of solution, that, while it betrayed the founder of the doctrine into innumerable inconsistencies, it has driven some of its later advocates boldly to deny that the nerves furnished to the heart and other organs above alluded to, are of any use at all (*b*), while others have, with still greater boldness, denied the existence of any such nerves in the actual substance of the organs in question (*c*). Others again have regarded these nerves not as the seat of any susceptibility which these organs manifest, nor the vehicle of any stimulus which they ordinarily obey, but as the channels by which extraordinary stimuli, such as that of the passions, are conveyed to them (*d*): and this is probably the truth, but it does not appear to be the whole truth. For it must be remembered that all the organs under consideration derive their nerves from at least two distinct sources—the ganglionic system, or that of the great sympathetic nerve, and that department of the cerebro-spinal system which is called respiratory, and to which the pneumo-gastric nerve belongs—and it appears to be the latter alone, as will be in future demonstrated, which is useful in the manner above supposed, so that the object with which they are furnished with the former is still unexplained.

Upon a fair review then of all that has been said on the one hand in favour of, and on the other in opposition to the two hypotheses which would refer irritability respectively to the nervous and muscular systems, we shall find that, while the former has the strong argument of the most direct analogy in its favour, and every objection which has been urged to it applies only to one department of the nervous system, although unfortunately that of which alone the early patrons of the hypothesis in question took any account, the latter, opposed as it is to all analogy, has been adopted only as a kind of alternative of a doctrine which, in its proper acceptation, has never been refuted, and is liable to objections which are apparently unanswerable. It has been recently shown, moreover, that the effects of narcotic substances and other agents, when applied to irritable parts, are the same, with respect to irritability, as when applied to that portion of the nervous system which is known to be appropriated to sensibility, with respect to this property (*e*); a circumstance which is decidedly in favour of the theory which would refer the former property, as well as the two latter, to the nervous system, in some one or other of its departments (*f*).

But if this theory is to be adopted, we must be prepared to show, 1. That there is a system of nerves, which, unlike the cerebro-spinal, is universally distributed over the body, and furnishes every muscle, whether ministering to the organic or animal functions, since

(*a*) The doctrine appears to have originated with Haller, the father of the *Vis Insita* department of irritability (*El. Physiol.* lib. iv. s. 5, and lib. xi. s. 3), and has been since advocated principally by Zimmerman (*De Irritabilitate*, 1751), Oeder (*De Irritabilitate*, 1752), Dr. Battie (*De Princip. Anim.* 1757), Fontana (*Atti dell' Acad. delle Sc. de Siena*, 1775), Blumenbach (*Inst. Physiol.* 1786), and Soemmering and his pupil Behrends (*Dissertatio qua demonstratur cor nervis carere, &c.*, 1792), and recently in this country, by Dr. Wilson Philip (*Phil. Trans.* 1815, and on the *Vital Functions*, 1817). One only of the above-mentioned data, on which this doctrine is founded, appears to have been questioned, and that is the recovery, after a time, of its irritability by a limb, the principal nerves of which have been divided, and the irritability afterwards destroyed, which, according to Mr. Earle, if the destruction have been perfect, does not take place. Dr. Alison how-

ever, assisted by Dr. Boswell Reid, has established the fact that, if the means taken to destroy the irritability be not such as to disorganize the muscles, this irritability is after a time restored. (*Mem. read to the British Scientific Association, &c.* 1834).

(*b*) Fontana.

(*c*) Soemmering and Behrends.

(*d*) Wilson Philip.

(*e*) Dr. W. C. Henry, *Ed. Med. and Surg. Journ.*, 1832.

(*f*) "The nerves," says Tiedemann, "are an essential condition in the vital manifestations of the muscles. This condition doubtlessly consists in the communication, by the nerves which ramify on the muscles, of an aptitude to be affected by excitants; the action of stimuli inducing the contractions of the muscular fibres only by means of an action upon the nerves." (*Tiedemann's Physiology*, translated by Gully and Lane, 1834, § 443).

the source of the irritability of all is unquestionably the same. 2. That this system of nerves, again, unlike the cerebro-spinal, continues to impart the quality which it is its office to furnish, during sleep and comatose diseases, and even for some time after apparent death. 3. That the filaments of this system of nerves, as distributed upon the muscular fibre, are often so minute as to be quite invisible. 4. That the quality derived from this system of nerves is not intercepted, like that derived from the cerebro-spinal system, by the division of the principal trunks proceeding to a muscle, by the removal of the brain, nor even, for some time, by the total separation of such muscle from the rest of the body. And, 5. That this system of nerves is competent, when the principal nervous trunks of a muscle have been divided, to renew that quality which it is its office to impart to it, if this have by any means been artificially exhausted. Now all this can be, if not demonstrated, at least rendered highly probable with respect to the ganglionic system of nerves, or that of the great sympathetic, so that no fair opposition to the theory in question, upon any one of the objections which were formerly regarded as fatal to it, can be sustained; and indeed, if irritability is to be referred to any department at all of the nervous system, this seems to be the only one which remains for it, the offices severally of the three departments of the spinal cord and their nerves, and of the brain—cerebrum and cerebellum—having been tolerably well established as quite distinct from that of imparting irritability (a). But, besides these negative arguments in favour of the doctrine that irritability has its immediate seat in the ganglionic system of nerves, not a few positive arguments may be adduced on the same side. Of these may be mentioned, 6. The earlier appearance, as we rise in the scale of animals, of this system of nerves than of any of the rest, corresponding with the exclusive display, by quite the lower tribes, of the property of irritability. 7. Its taking precedence also of all the rest in the order of its development in the human embryo, in correspondence with the earlier manifestation, by the fetus, of irritability, than of any other property of the nervous system. 8. Its being rarely or never found wanting in mature human monsters, appearing to indicate the greater indispensability of this system—as the source of irritability—to life, than of those departments of the nervous system which minister to sensation and thought, and which are so frequently defective. 9. Its being relatively more developed in infants and females, than in adults and males, corresponding with the higher degree of irritability in the former than in the latter. 10. Its

(a) It was formerly presumed with great vagueness by Willis (*Anatome Cerebri*, 1664), followed by Vieussens, Boerhaave, Du Hamel, and others, that, while the voluntary motions depended upon the cerebrum, the involuntary, such as that of the heart and other organs which minister exclusively to the organic functions, depended upon the cerebellum and its presumed offset, the pneumo-gastric nerve, which has been taken as equivalent to ascribing to the cerebellum the origin of irritability. It should be mentioned, however, that it was never so much the source of susceptibility of action which the physiologists of those days were in quest of—this being always at hand in the supposed vital principle—as that of the stimulus to action, in addition to that which the said vital principle supplied; but in as far as irritability is now known to be the only modification of nervous energy which the involuntary motions require, their chief stimulus to action being confessedly of a very different nature, if they derive any thing from the cerebellum, it can be only the property in question. More recently, also, M. Le Gallois, supported rather too hastily by Humboldt, Percy, and Hallé, in their report upon his experiments, (*Sur la Principe de la Vie*, 1812), has attributed a similar office, at least as far as the heart is concerned, to the spinal cord. But that the muscles, if not of voluntary, certainly of involuntary motion, were as independent, for either their susceptibility of

action, or their stimulus, of both the cerebellum and spinal cord as of the cerebrum, was known, not only to Glisson, but even to Galen; who, in placing his vital and natural spirits respectively in the heart and liver, while his animal spirits were placed in the brain, indicated sufficiently distinctly his knowledge of the independence enjoyed by all the organic functions of every department of that system which is subservient to the animal. It has been satisfactorily shown also by Haller and Wilson Philip, in their attempts to establish the muscular tissue as the immediate seat of irritability, as well as by Cruikshank (*Phil. Trans.*, 1795), Bichat (*Sur la Vie et la Mort*, 1802), Brodie (*Phil. Trans.*, 1810), Clift (*Phil. Trans.*, 1815), Wiltbank (*Philadelphia Journ.*, 1825), and many other experimenters, that all these organs—cerebrum, cerebellum, and spinal cord—may be either deadened by narcotic substances, or even destroyed or removed—provided this be not done so suddenly and so violently as to produce, as was done by Le Gallois, an irrecoverable shock on the whole system—without stopping, or even materially impairing the involuntary actions. The latter may indeed be effected through these organs, so long as they continue in action, as in the case of the passions, by which an inordinate stimulus is communicated; but they are not at all dependent upon them for either the susceptibility or the stimulus by which their regular and uniform performance is maintained.

general similarity in structure to the sensiferous system of nerves—particularly the central portions of the latter—which are confessedly the seat of the directly analogous property of sensibility. 11. The precisely similar effects, already alluded to, of certain agents applied respectively to parts possessed of irritability, as imparted to them probably by the ganglionic system of nerves, and to these central parts of the sensiferous system. And 12. The differences in the aspect and physical properties of the ganglionic nerves corresponding to the different character of the irritability of the organs on which they are severally distributed.

On each of these alleged testimonies then, in favour of the presumption that the ganglionic system of nerves is the primary seat of irritability in all the tribes of organized beings which are possessed of such a system, it seems proper—as the subject is of primary importance—to make a few remarks; and afterwards to state, and endeavour to reply to some of the principal objections which have been urged against it, and which may not have been already met incidentally in the previous observations (a).

(a) Before the time of Galen the ganglionic system of nerves was entirely unknown, and although by him and his followers, the Arabians, the existence of this system, as well as its supposed origin from the upper maxillary branch of the trigeminus nerve was pointed out (*De Nerv. Orig.*), as its other supposed origin from the abductor nerve was subsequently by Eustachi (*Tab. xviii, fig. 2*), it was not till the time of Willis that the ganglionic nerves were generally considered as a part of the nervous system at all. Willis however still looked upon them as merely an appendage to the cerebro-spinal system, and represented them, both in his verbal descriptions of them, and in his curious diagrams of their distribution, as growing upon the latter "*ut frutex super alio frutice*" (*Anat. Cerebri*, 1664); and this notion having been adopted by Vieussens (*Neurograph.*, 1684), Lancisi (*Op. Omu.*, 1745), Meckel, sen., (*Mem. de Berlin*, 1745), Zinn (*Mem. de Berlin*, 1753), Haare (*De Gangl. Nervorum*, 1772), Scarpa (*De Nerv. Gangl.*, 1779), Monro (*On the Struct. and Funct. of the Nerv. Syst.*, 1783), Blumenbach (*Inst. Physiol.*, 1786), Chaussier (*Exposition, &c.*, 1807), Le Gallois (*Sur la Principe de la Vie*, 1812), Bécларd (*El d'Anat. Gén.*, 1823), Wilson Philip (*On the Vital Functions*, 1817), Mason Good (*On the Study of Medicine*, 1825), and numerous other writers, both before and since the time that their independence was insisted on by Winslow, it has become a very prevalent custom to regard these nerves as of very secondary importance, and the names imposed upon the system in general, as well as the uses assigned to it, have generally corresponded with this idea. Thus by Scarpa as the cerebro-spinal ganglions, or those appertaining to the sensiferous nerves, are called simple, so those of the ganglionic system, properly so called, are designated compound, while by other authors, as the former are dignified by the appellations of primary ganglions, or ganglions d'origine, so the latter are sunk into secondary ganglions, or ganglions de reinforcement; and the whole system is pedantically described by Good as "an epicycle within the two cycles of cerebral and vertebral influence," and as "equally enriched

with the nervous stores of the brain and spinal marrow." (*Study of Med.*, 1825, vol. iv). With respect to the uses also attributed to this system of nerves under the same impression, the ganglions of the sympathetic nerve were regarded by Galen, their discoverer, as serving in the manner of buttresses, as it were, interposed at convenient distances, in order to strengthen the nerves as they receded from their reputed origin in the spinal cord or brain; and by Willis, on the one hand as a kind of diverticula of the animal spirits received from the brain, and, on the other—as the name so unfortunately given by him to this system of nerves implies—as a means of keeping up a sympathy between distant organs; and a similar opinion was adopted by Vieussens and Meckel. Lancisi, again, looked upon the ganglions of this system in the light of little forcing pumps, adapted to propel the said animal spirits along the nerves after the influence upon them of the dura mater—which, at this time, was regarded as a large muscle, serving to eject them primarily from the brain—was expended; and he accordingly describes them as furnished, for this purpose, with a proper muscular apparatus (*Morgagni Advers. Anat.*, part 5, p. 113). The rest of the authors who have adopted the notion of the subserviency of the ganglionic to the cerebro-spinal system, in particular Zinn, Scarpa, Monro, and Wilson Philip, have in general represented them as serving partly by the concentration within them of numerous nervous cords coming from the cerebro-spinal system to collect the so-called nervous energy—the old animal spirits—from various sources, and to transmit it afterwards in a more equable stream to the more important organs, and partly by the subdivision within them of these nervous cords, and the subsequent re-union of the filaments into other cords, to obviate the dangers which would have arisen had these organs received their nerves directly from only a few sources, instead of indirectly from several. Supposing, it has been said, that the heart or intestinal canal, for example, had received twenty nerves each directly from a distinct point of the cerebro-spinal system, and that one of these points

I. The universal distribution of the ganglionic system of nerves, although, at first sight, not very palpable, may very easily be inferred. It has, indeed, been the general practice

of origin had been cut off, it would have followed that a twentieth part of the organ would have lost the whole of its power, and disorganization and death must have ensued; but, from all these nerves previously passing through a ganglion, where they are so subdivided, and their filaments so re-united that every nerve afterwards proceeding from the ganglion contains more or fewer of the filaments of every nerve which enters it, if one of the points of origin be cut off, it follows, not that a twentieth part of the organ loses the whole of its power, but that the whole organ loses a twentieth part of its power, which is an accident of much less consequence. This hypothesis, unlike all those previously mentioned—which are unworthy of any serious attention—is so neat and pretty a one, that it is almost a pity that it is not well-founded. But it must be remembered, in the first place, that this appearance of certain nerves entering and others proceeding from a ganglion, and this in such a manner as that the latter are formed by the re-union of the separated filaments of the former, would equally result from *all* the nerves which are connected with a ganglion arising directly—as is in all probability the case—by minute filaments from the central parts of this organ, and proceeding in opposite directions; and, secondly, that the character of the influence communicated by the cerebro-spinal nerves, or those which are supposed to enter the ganglions, is known to be quite different from that which the proper ganglionic nerves, thus represented as directly derived from them, are known to impart. It could not, indeed, long escape observation that those organs which derived their nerves principally from the ganglionic system, unlike those which were furnished by the cerebro-spinal, were destitute of sensibility, and out of the dominion of the will, and it became, therefore, a necessary ingredient in all the hypotheses invented to explain the uses of the ganglions, that they served to intercept sensibility and volition, and to perform their part, as Willis says, “Cerebro inconsulto;” but, if their whole agency be as appendages to the cerebro-spinal system, in intercepting the only generally acknowledged properties and powers which are derived from the latter, what, it may be asked, have they left to communicate? The remarkable differences, also, in the structure of a ganglion and that of a mere plexus—the office of which really is probably to effect such an intermingling of the filaments of the cerebro-spinal nerves as has been above described—the abundance of grey matter which they contain—and which there is good reason to believe is always a primary source of some distinct faculty or power—

their frequently almost isolated situation, and the general want of correspondence in size or number between the nerves which are represented as entering and those which are said to proceed from them, all seem to shew that this, as well as all the other hypotheses, invented by authors who have presumed upon the secondary character of the ganglionic system, is untenable, and, as remarked by Magendie, “N'est qu'un jeu d'esprit.” “They teach us only,” as Sir Charles Bell observes, “what the sympathetic nerve is *not*, and by this means we are left to conjecture what really are its functions.” (Human Anat., vol. ii., p. 608.)

It was thus, then, from the circumstance of the ganglionic system of nerves not having been generally introduced to the notice of physiologists, till their minds were fully made up respecting the cerebro-spinal system as the only primary source of nervous energy, as it is called, that the real independence of the former—nay, in all probability, its rather serving as a foundation for the latter, since it is actually the first formed, than being engrafted upon it as an insignificant appendage—was overlooked, and facts were warped in support of prejudice and habit. Perhaps Winslow was the first to describe the ganglions of the sympathetic system as a kind of nuclei, or little brains, generating a peculiar property or power of their own (Exposition Anat. 1732, sect. 357—364), a description which was adopted by Le Cat (Traité du Fluide Nerv., 1765); but it was in the celebrated essay of Johnstone (On the use of the Ganglions, 1771), that the opinion that they are the primary source of irritability, was for the first time promulgated. It is true the promulgation of this opinion, like that of Willis, with respect to the cerebellum, and that of Le Gallois, with respect to the spinal cord, in this character, was indirect; since, as before remarked, it was not so much of the source of susceptibilities as of stimuli, that the physiologists have till very lately been in quest. Nevertheless, in asserting that the ganglionic system is to the involuntary organs what the cerebro-spinal is to the voluntary, Johnstone at least indirectly admitted the former as the primary seat of irritability, since this property is now generally acknowledged to be the only modification of nervous energy of which the involuntary organs stand in need. This doctrine, however, did not assume a precise and definite character till it was embraced by Pëffinger (De Struct. Nerv., 1784), and Reil (De Struct. Nerv., 1797), according to the latter of whom, “Perceptionem quædam habet istud systema; impressiones nempe recipit, et contra eas reagit; sed ista perceptio in proprio manet territorio, et cerebro laud communicatur”—

to describe the nervous cords which pass between the cerebro-spinal system of nerves and the ganglions of the great sympathetic, as the roots or origins of the latter, and those only

a definition of irritation, thus placed primarily in the ganglionic system of nerves, which differs from the original one of Glisson only in being much longer and much less elegant. The doctrine of the independence of the ganglionic system was espoused by Cuvier (*Leçons d'Anat. Comp.*, 1799), and particularly insisted on, with his accustomed eloquence, by Bichat (*Sur la Vie et la Mort*, 1802), who represented all the ganglions of this system as "*des centres particuliers de vie organique, analogues au grand et unique centre de la vie animale, qui est le cerveau*;" and who further demonstrated, not only that all these ganglions were collectively independent of the cerebro-spinal system, but that each ganglion was independent of every other—nay, that each nerve proceeding from such a ganglion was in a great measure independent of that ganglion, and even that each point of such a nerve was independent of all the rest, and constituted, *per se*, a distinct focus of nervous influence. Richerand (*Physiologie*, 1804), and Gall (*Anat. et Physiol. du Syst. Nerv.*, 1810), adopted similar tenets, and they are further inculcated by Wutzer (*De Corp. Hum. Gangl.* 1817), and Broussais (*Journ. Univ. des Sc.* 1818); the latter in particular describing the ganglionic system of nerves as possessing a peculiar kind of sensibility (*i. e.* irritability), with which it immediately endows all the organs destined for nutrition, secretion, and the other organic functions, and, by means of its repeated connexions with the cerebro-spinal system, all the organs of the body. By Bellingeri (*Dissert. Inaug.* 1818), a certain primary instrumentality in effecting all the involuntary motions is allowed to this system, although it must be confessed that this instrumentality signifies with him, not always irritability alone—or, as he calls it, organic sensibility—but sometimes a stimulus also, such as passion or instinct; and the same reproach of want of consistency attaches still more forcibly to Lobstein, one of the reputedly strongest patrons of the doctrine under consideration (*De Nerv. Sympath.* 1823). He has evidently a glimmering of the truth of this doctrine, since he describes the ganglionic system of nerves as presiding in general over the action of the heart, nutrition, secretion, and so forth; and, in speaking of the first, remarks that whereas, with respect to the voluntary muscles, the nerves, of one kind or another, convey to them uninterruptedly "their tone, strength, vital energy or characters and properties of animal nature"—all which, if it signify anything, signifies only irritability—and at intervals the stimuli by which they are excited to voluntary motion—in other words volition—with

respect to the involuntary muscles, the nerves convey to them in general the former alone, their stimulus being derived from other sources. Still as he appears to have no idea that different nerves are employed, in the former case, in the two processes alluded to—the irritability of the parts being derived, in all probability, from the ganglionic nerves with which they are supplied, while the stimulus is certainly conveyed by the motiferous—but attributes both to the cerebro-spinal nerves in general, so he seems to think that in the latter, while the irritability is always derived from the ganglionic nerves, the stimulus may, in some cases, be so too. He appears in short to have no distinct idea of the plurality of the nervous energy, as dependent upon the several departments of the nervous system, every nerve being with him, as with Mason Good and other physiologists of the same stamp, a nerve of all work according to circumstances, and engaged apparently upon the condition of making itself generally useful; and, from this defect of an asserted leading principle, his work, in the physiological part of it, is such a mixture of truth and error, that it is almost impossible to make any thing of it, and it has accordingly contributed perhaps very little towards establishing the doctrine which it is considered to advocate. Not so with that of Brachet (*Sur les Fonctions du Syst. Nerv. Gangl.*, 1823), who distinctly represents the ganglionic system of nerves as the seat of irritation, or, as he chooses to call it, "imperceptible sensation," and as presiding in an especial manner over the several viscera of the body. This is rather a loose and untangible way of expressing what is intended; but it amounts to this—that this system of nerves is adequate to effect all the functions to which irritability alone is essential, while others are requisite as often as either sensibility, the faculty of thinking, or the power of exciting voluntary motion, is called for. Mr. Parker, of Birmingham (*Medical Gazette*, 1831), Dr. C. W. Henry, of Manchester (*Ed. Med. and Surg. Journ.*, 1832), Dr. Lovell Phillips, of Bath (*On Inflammation*, 1833), and many other British authors, have recently adopted similar opinions; so that the doctrine above advocated may be regarded as certainly increasing in popularity even among a people who are almost as notorious for the pertinacity with which they cling to the effete tenets of their Whytts, their Monros and their Cullens, as the ancient Egyptians for their blind adherence to the precepts of the renowned Tot, or Hermes Trismegistus, the Chinese to those of Confucius, or the Persians to those of Zoroaster.

which pass between the ganglions and other organs as their branches; and hence it is a very prevalent impression that the distribution of the ganglionic nerves is extremely circumscribed and almost confined to the viscera of the chest, belly, and pelvis. We must remember, however, that the larger blood-vessels are everywhere directly supplied by these nerves, and that branches of the blood-vessels, carrying with them continuations of the same system, proceed to every organized point of the body—that is to say, to every point possessed of irritability (a); so that, even admitting that the description of the origins of the ganglions just alluded to were a true one, no objection to the doctrine which ascribes to the nerves of this system the source of irritability, founded upon their supposed circumscribed distribution, could be maintained.

(a) If this were not the case, what is called a palsy of any part of the body, that is to say a failure of the faculty of sensibility and of the stimulus of volition, would always entail a corresponding failure in the same parts of nutrition, secretion, and absorption. The latter class of functions how-

ever require only the faculty of irritability, which is not impaired in this disease, for their exercise, whereas sensation and voluntary motion require in addition other properties and powers, in the failure of which this disease consists.

Foreign Medicine.

Abscess communicating with the Colon.

M. A. BERARD showed the Anatomical Society a preparation he had taken from a woman that had been seized with hypogastric pains after labour, and in whom an abscess of the iliac fossa was suspected. The following was found on dissection. A large abscess commenced at the superior-posterior part of the left loin, between the colon and the abdominal parietes; this abscess had reached the hypogastric region, passing the iliac fossa, and the intestine being throughout situated outside of the peritoneum. An induration of the cellular tissue of the pelvis had stopt its progress just before the bladder; but the pus had made a passage towards the right iliac fossa, separating the peritoneum in the hypogastric region. From the right iliac region it had proceeded upwards along the median line as far as the umbilicus; there it had found a place immediately underneath the skin, had separated it all around the navel, the skin over which, however, was sound and adherent to the subjacent tissues. The progress of this abscess, therefore, a curve with the concavity looking upwards, and had risen in the right loin to an elevation corresponding to that which it had attained in the posterior part of the left loin. At this latter point, the abscess communicated with the descending colon by a rounded aperture which, on the side of the abscess, was surmounted by a soft, circular puffiness.

M. Berard asks what could be the origin of this communication: is it a lumbar abscess that by the erosion of its parietes, had found a passage into the intestine? or is it an ulceration of the intestine that had implicated the cellular tissue, and then determined the formation of an abscess? The whole internal surface of the great intestine was hard, un-

even, and ragged; its parietes were thickened throughout the whole circumference.

M. Tessier remarked that the supposition of a primitive abscess of the iliac fossa was precluded by the perfect soundness and vermillion colour of the iliac muscle, whereas in the abscess of that region it is considerably changed, softened, and as it were macerated in the pus.

Ligature of the Brachial Artery at the bend of the Elbow.

M. Graëfe thinks that the method of Hunter, however advantageous in general, ought occasionally to be deviated from. He has cited an instance in which the brachial artery had been wounded in bleeding. He did not see the patient till three days after the accident, at which time the arm was swollen, tense, of a livid red, and very painful when pressed. In this case the tumefaction of the member would have presented an insurmountable obstacle to the ligature of the artery at the usual place—the internal margin of the biceps. M. Graëfe therefore preferred operating at the bend of the arm, because there the jet of blood would serve as a guide to the artery, which was accordingly tied above and below the wound in its coats. The patient was dismissed cured at the end of a month.—*Gazette Médicale*.

Cancer of the Stomach without Tumour or Vomiting.

On opening the body of a person above 50 years of age, in whom neither swelling of the epigastrium, cardialgia, nor vomiting had been observed during life, but merely an entire disgust to food during a month previous to death, M. Ribes found a considerable schirrous induration of the small curvature of the stomach, with very distinct contraction of the two orifices, both of which were also indurated. There was no dilatation of the œsophagus.—*Revue Médicale, Février*.

A NEW PRACTICAL FORMULARY

OF HOSPITALS, OR A

Collection of Formulæ of the Civil and Military Hospitals of France, Germany, Italy, Great Britain and Ireland, &c., containing the Indication of the Doses in which simple Substances, magistral and officinal Preparations of the Codex are administered, the use of New Medicines, and general receipts on the art of prescribing. By M. EDWARDS, M. D., and P. VAVASSEUR, M.D., of the Hospitals of Paris—1834. Translated and augmented by M. RYAN, M. D. &c. &c.

(Continued from p. 341.)

Resolvent Liniment. H. St. Ant.

Rx. Camphoræ, 3 ij;
Aquæ calcis, 3 ss.;
Olei olivæ, 3 iss.

Misc.

Camphorated Soap Liniment. H. of Germ.

Rx. Camphoræ, 3 ij;
Ung. basilici, 3 j;
Sapon. nigr. 3 ss.

Misc.

*Employed in lumbago.**Pommade of Camphor.* H. de la Mat.

Rx. Pulv. camphoræ,
Oxid. zinci, ā ā gr. iij;
Butyri recent. 3 iij;
Spermatis ceti, 3 ij;
Ceræ albæ, 3 iij.

Melt the greasy substances, and add while triturating the camphor, and the oxide of zinc.

Employed in certain diseases of the eyes, to prevent the eye-lids from adhering together during sleep. It should be spread upon pieces of fine linen, which are to be applied to the borders of the eye-lids, and kept there by a bandage.

Cerate of Camphor. H. Militaires.

Rx. Camphoræ, unam partem;
Cerat. simplic., decem partes.
Tere simul.

Cataplasm Antiseptique. Hot. D.

Rx. Camphoræ, 3 ij;
Cataplasm. lini, q. s.
Pulveris cinchon, 3 iv.

Misc.

Employed with success in simple and hospital gangrene.

[I employ the camphorated liniment with opium in pertussis, with great success—Vide Opium. T.]

ASSAFŒTIDA.

A very active excitant, which appears to have a particular influence on the nervous system. In large doses it irritates the intestinal canal; in smaller ones, its general action is antispasmodic. It is frequently employed with advantage in hysteria, hypochondriasis, and nervous colics. It is recommended as an emmenagogue and an-

thelmintic. Good effects have been obtained from its use in certain cases of amenorrhœa, and in affections dependant on the presence of worms.

[It is used in large doses in hysteria, chorea, epilepsy, and other nervous disorders. T.]

INTERNALLY. Gr. x 3ss in pills, or in an emulsion.

Teinture. P. ʒj—3 ij and more, in a potion.

Teinture Éthérée. P. Gutt. xx—xxx, in a potion.

Mixture of Assafœtida. H. of Eng.

Rx. Assafœtidæ, ʒj;
Aquæ menthæ, 3 ij.

Fiat mistura, cujus capiat cochl. mag. secundâ quâque horâ.

Mixture of Assafœtida. (Millar).

Rx. Assafœtidæ, 3 iij;
Ammonizæ acetatis, 3 j;
Aquæ pulegii, 3 ii.

Dosis cochl. mag. secundâ quâque horâ.

Pills of Assafœtida. H. of Germ.

Rx. Assafœtidæ, 3 ij;
Saponis amygdal, 3 j;
Olei fœniculi, m vi.

Fiat massa, in pilulas gr. ij distribuenda.

Compound Assafœtida Pill. H. of Eng.

Rx. Assafœtidæ, gr. xx;
Ipecacuanhæ,
Scillæ, ā ā gr. ij;
Aquæ, q. s.

Fiant pillulæ vi, ex quibus sumat unam vel duas ter quaterve in die.

Antispasmodic Pills. M. de Santé.

Rx. Assafœtidæ,
Potassæ nitratis, ā ā ʒij;
Extracti cinchonæ,
—— catechu, ā ā 3 ij;
Moschi, gr. xv.

Divide in pilulas gr. vi, quarum sumat ij—iv in die. The quantity may be increased if necessary.

Antispasmodic Pills. Hôt. D.

Rx. Assafœtidæ,
Gummi acaciæ, gr. ij;
Moschi, pulveris, gr. j;
Pulveris valerianæ, gr. viij.

Fiant pilulæ tres, in die capiendæ.

Pills of Assafœtida and Musk. Hôt. D.

Rx. Assafœtidæ, gr. xij;
Moschi, gran., gr. vi.

Fiat massa, in pilulas sex dividenda, quarum capiat unam vel duas quotidie.

Antihysterical Drops. H. of Germ.

Rx. Tincturæ assafœtidæ, 3 ij;
—— castorei, 3 jss;
—— opii, 3 ss.

Guttæ x ad xx sumendæ pro dosi in potione vel cyatho aquæ.

EXTERNALLY. In an enema 3j to ij.

Lavement of Assafoetida. M. de Santé.

Rx. Assafoetidæ, 3j;
Vitelli ovi, No. j;
Aquæ, 3vj.

Fiat enema.

Employed in nervous affections, hysteria, &c.

Fetid Enema. H. of Eng.

Rx. Assafoetidæ, 3ij;
Decocti avenæ sativæ, 3x.

Misce pro enemate.

AMMONIACUM.

An energetic stimulant, whose action resembles that of assafoetida. It is employed in asthma, derangement of the respiratory and digestive systems, chlorosis, hysteria, &c. It is also used in chronic pulmonary catarrh, as an expectorant. This substance is useful as an external application in the treatment of tumours, not inflammatory, white swellings of the articulations, scirrhus, &c. It enters into the composition of many plasters.

INTERNALLY. Gr. x—3ss in pills or suspended in a potion by means of the yolk of an egg.

Tincture. P. ʒj—3ss. in a potion.

Pilules balsamique or *de Morton.* P. Gr. vj ad xx.

Mixture of Ammoniacum.

Rx. Ammoniaci, 3ij;
Aquæ, 3viij.

Triturate the ammoniacum, gradually adding the water. The dose is from 3ss to j, in a mucilaginous potion.

[It should be sweetened, on account of its unpleasant taste. T.]

Lac Ammoniacum.

Rx. Ammoniaci, ʒj;
Oxymellis scillæ, 3ij.

Decoque ammoniacum cum oxymelle et adde,

Aquæ pulegii, 3vi;
Menthæ piperitæ, 3iv.

Misce: dosis cochl. mag. secundâ quâque horâ.

[This is an excellent remedy, combined with comp. tinct. of camphor, in chronic bronchitis or winter cough of aged persons. T.]

In pulmonary catarrhs.

Expectorant Potion. H. de la Ch.

Rx. Rad. polygalæ senegæ, 3ij;
Aquæ ferventis, 3ij.

Coque, cola et adjice,
Ammoniaci, 3ji;
Syrupi tolutani, 3i.

Fiat mistura, cujus sumat cochl. mag. secundâ quâque horâ.

In pulmonary catarrh not inflammatory.

Diuretic Emulsion. (Swediaur.)

Rx. Ammoniaci, 3ij;
Vitellorum ovari, No. ij.

Solve et adde,

Infusi radicis oreosæ lini, 3viij;
Potassæ nitratis, 3ij.

Dosis cochl. mag. sæpe in die.
In dropsies.

Pills of Ammoniacum. H. St. Ant.

Rx. Ammoniaci, ʒiij;
Pulveris scillæ, ʒj.

In pilulas xlvij divide, quarum sumat iv vel v quotidie.

To facilitate expectoration in chronic pulmonary catarrh. In large doses, these pills act as a gentle purgative.

Pills of Ammoniacum and Myrrh. H. of Eng.

Rx. Ammoniaci,
Myrrhæ, āā 3ij;
Aquæ, q. s.

In pilulas, xl forma, ex quibus capiat ij ad iv bis vel ter in die.

Pilules Fondantes. Hôt D.

Rx. Ammoniaci,
Pulveris, rhei, āā 3j;
Assafoetidæ,
Croci, āā 3ss;
Aloes, gr. x;
Saponis medicinalis, 3iij.

Fiat massa, in pilulas granorum iij distribuenda, capiat duas bis vel ter de die.

Pilules Fondantes. H. of Germ.

Rx. Ammoniaci, 3ij;
Saponis medicinalis, 3j;
Olei juniperi, gut. xx.

Divide in pilulas granorum ij, quarum sumat xij ad xv quotidie.

EXTERNALLY.

Resolvent Collyrium. H. of Italy.

Rx. Ammoniaci, 3ij;
Vitelli ovi, q. a.

Tere et adjice,
Tincturæ opii, gut. xxx;
Aquæ fontanæ, 3x.

Fiat collyrium.

[The liquor opii should be substituted for the tincture. T.]

Ammoniacum Plaster. H. of England.

Rx. Ammoniaci, 3vij;
Aceti scilliticæ, 3ij.

Misce.

GALBANUM, SAGAPENUM, and OPOPANAX, possess the same properties as ammoniacum and assafoetida. They enter into the composition of many officinal preparations.

VALERIAN.

A powerful general excitant, but whose action is principally on the brain, and which, in small doses, acts as an antispasmodic and tonic. It is employed with advantage in hysteria, epilepsy, certain cases of megrim and other nervous affections, hypochondriasis, and fevers presenting atonic symptoms. It is recommended as a powerful febrifuge.

[It has unjustly fallen into disuse in this country. It was formerly combined with cinchona, and used advantageously. Dr. Epps thinks it a very valuable remedy. T.]

INTERNALLY. Powder. $\mathfrak{D}\text{ij}$ — 3j , twice a-day, and gradually increased to 3iv , and even more.

Infusion, or Decoction. 3j — iv to Oij of water.

The *Infusion de Valériane*, of the H. de la Ch., and of the Hot. D., contain 3j to the same quantity of water.

Distilled Water. P. 3ij — iv .

Extract. P. $\mathfrak{D}\text{j}$ — 3ss , in pills.

Tincture. P. 3ss — j , in a potion.

Antispasmodic Powder. H. Militaires.

Rx. Pulveris valerianæ, 3j ;

———— cinnamomi, gr. xij.

Divide in chartulas sex in die capiendas.

The *Poudre Antispasmodique* of the Hot. D. contains 3j of valerian, and ij of cinchona. It is used in the same cases.

Bolus of Valerian. H. de la Mat.

Rx. Pulveris valerianæ, gr. xx;

Potassæ sulphatis, gr. ij ;

Syrupi aurantii, q. s.

Fiat bolus.

In spasmodic affections.

Pills given in Epilepsy. Hot. D.

Rx. Pulveris valerianæ, gr. xxx;

Castorei, gr. iv ;

Oxidi zinci, gr. xx;

Syrupi simplicis, q. s.

Divide in pilulas vi, in die sumendas.

Antispasmodic Electuary. (Swediaur.)

Rx. Pulveris valerianæ,

———— florum aurantii, $\mathfrak{a}\mathfrak{a}$ 3vi ;

Misce. Dosis cochl. min. bis vel ter in die.

Compound Infusion of Valerian. H. of Germ.

Rx. Valerianæ, 3ij ;

Aquæ ferventis, 3viij .

Macera, cola, et adde,

Aquæ cinnamomi, 3ij ;

Etheris sulphur. alcoholiz. 3ij ;

Liquoris anodynii Hoffm. 3ij ;

Syrupi simplicis, 3j .

Dosis, cochl. mag. singulâ vel secundâ quâque horâ.

Excitant Potion. H. Militaires.

Rx. Valerianæ, 3ijss ;

Aquæ, 3viij .

Coque ad dimidiam, cola et adde,

Tincturæ cinnamomi, 3ss ;

Syrupi simplicis, 3j .

Fiat potio, cujus capiat cochl. mag. secundâ quâque horâ.

Syrup of Valerian. H. of Germ.

Rx. Valerianæ, 3viij ;

Aquæ ferventis, Oij .

Infunde per horas tres, cola et adde sacchari, lbiv.

The dose is 3ss — j , in stimulant and antispasmodic draughts.

MUSK.

A diffusible stimulant and energetic antispasmodic. It is employed in typhoid fevers, and in those accompanied with ataxia, to combat nervous symptoms, such as delirium,

convulsive movements, &c. It is recommended in whooping cough, epilepsy, tetanus, hydrophobia, hysteria, and other affections purely spasmodic. Combined with ammoniacum it is employed with success to arrest the progress of gangrene. It is administered to children in the form of enema, in convulsions arising from dentition. It is not much used on account of its dearness.

[It is also very much adulterated. T.]

INTERNALLY. Gr. v— 3ss , in pills, or suspended in an emulsion.

Teinture. P. Gut. xv— $\mathfrak{D}\text{j}$, in a potion.

Teinture Éthérée. P. The same doses.

Antispasmodic Powders. H. of Germ.

Rx. Moschi, gr. xxxij;

Opii, gr. iv ;

Sacchari, 3j .

Divide in chartulas xij ex quibus sumatur una, singulis horis.

Pills of Musk. H. St. Ant.

Rx. Moschi, 3j ;

Oxidi zinci, 3ss .

Fiat pilulæ xxxvi, quarum capiat viij—x in die.

In the treatment of nervous disorders.

Antihysterical Pills. H. St. Ant.

Rx. Moschi,

Extracti valerianæ, $\mathfrak{a}\mathfrak{a}$ $\mathfrak{D}\text{j}$;

———— opii, gr. xij.

Divide in pilulas xvi.

Each pill contains gr. $\frac{1}{2}$ of opium, and $1\frac{1}{2}$ of musk.

Mixture of Musk. H. of England.

Rx. Moschi,

Gummi acaciæ,

Sacchari, $\mathfrak{a}\mathfrak{a}$ 3j ;

Aquæ rosæ, 3vj .

Sumatur 3j ad ij , secundâ quâque horâ.

The *Mixture Musquee* of the M. de Barté is composed of gr. xij of musk, 3ij of sugar, and 3ij of water.

Julep of Musk. H. of Italy.

Rx. Moschi, gr. xij;

Aquæ menthæ piperitæ, 3ij ;

Syrupi corticis aurantii, 3j .

Fiat mistura, cujus cochl. min. omni horâ diei sumenda.

Antispasmodic Potion.

Rx. Tincturæ moschi, gut. xv;

Aquæ destillatæ pulegii,

———— tilis, $\mathfrak{a}\mathfrak{a}$ 3ij ;

Syrupi aurantii, 3j .

Dosis cochl. mag. omni horâ.

CASTOR.

A stimulant and antispasmodic, employed with advantage in spasmodic affections, such as hysteria, hypochondriasis, nervous palpitations, convulsive hiccough, epilepsy, nervous asthma, amenorrhœa, when it depends on a spasmodic state of the uterus, &c. On account of its stimulating action, it is useful in typhoid, adynamic, and ataxic

(typhous) fevers, to restore the general strength, and to combat nervous accidents.

INTERNALLY. *Powder.* Gr. x— \mathfrak{D} j, and even 3j, several times during the 24 hours, in pills or suspended in a vehicle.

Teinture. P. Gut. x—xxx, in a potion.

Teinture Éthérée. P. The same doses.

Antispasmodic Powder. H. of Italy.

R_x. Castorei, gr. ij;
Magnesiæ, 3j;
Gummi acaciæ, gr. xij.

Fiat pulvis pro dosi.

Pills of Castor. H. of America.

R_x. Castorei, 3j;
Acidi succinici, 3ss;
Extracti gentianæ, q. s.

Divide in pilulas xxiv, de quibus sumat ij—vi in die.

Antispasmodic Boluses. H. de la Pit.

R_x. Pulveris castorei,
—— succini,
—— assafoetidæ,
—— valerianæ, ā ā 3 ss;
—— camphoræ, \mathfrak{D} j;
Syrupi succinici, q. s.

Fiat massa, in bolos granorum vi dividenda quorum sumantur vi ad viij in die.

A Sedative and Antispasmodic Potion. H. des Enf.

R_x. Tincturæ castorei, gut. xx;
Aquæ valerianæ,
—— pœoniæ,
Syrupi simplicis, 3 ij.

Fiat haustus, partitis vicibus, sumendus.

Antihysterical Potion. H. of Germ.

R_x. Tincturæ castorei, 3 ij;
Etheris sulphur. alcoholiz. 3j;
Aquæ melissæ, 3 vi;
Syrupi aurantii, 3 v.

Misce. Dosis, cochl. mag. secundā quāque horā.

EXTERNALLY. In enema, 3 ss—j, kept in suspension by means of gum acacia.

AMBER GREASE.

An energetic stimulant. Employed as an antispasmodic in neuroses, convulsions, adynamic fevers, &c. It is seldom used at present. It enters into several officinal preparations.

INTERNALLY. Gr. v— \mathfrak{D} i, in pills.

Teinture. P. \mathfrak{D} i—3 ss, in a draught.

Teinture Éthérée. P. Gutt. xij—xxxvi, in the same manner.

Powder of Musk and Amber Grease. H. of Germ.

R_x. Ambre grisæ, gr. xvij;
Moschi gran. gr. iij;
Olei cinnamomi, m ij;
Sacchari albi, 3 iij.

Sit pulvis, ejus capiat, gr. xij— \mathfrak{D} i sæpe in die.

Pills of Amber. H. of Germ.

R_x. Ambre grisæ,
Confect. aurantii,
Extracti cinchonæ,
Opii pulveris, sing. 3 i.

In pilulas gr. ij redige—dentur v—x tertiis horis.

These are considered powerfully aphrodisiac. (See *Aphrodisiacs*.)

Balsamic Tincture of Amber. (Dippel.)

R_x. Ambre grisæ,
Bals. peruvian. ā ā 3j;
Potassæ subcarbon. 3 iij.

Tere simul et adde,
Alcoholis rectific. 3 ivss.

Dosis mxv—xx. As an antispasmodic in the trismus of new-born infants.

ANIMAL OIL OF DIPPEL.

[This is obtained after the distillation of animal matters, especially hartshorn. Its chief ingredient is subcarbonate of ammonia. T.]

In large doses it is an active poison; in small quantities it is said to be stimulant and antispasmodic. It is seldom used at present.

INTERNALLY. Gutt. v—xx, in sugar and water.

COD LIVER OIL.

Stimulant and antispasmodic. Employed in Germany in gout, rheumatism, scrofula, &c.

INTERNALLY. One to three table-spoonsful twice a day. A cup of coffee, tea, or some aromatic infusion should be taken after it.

[This medicine is extremely disagreeable. It is much used at Manchester. T.]

EXTERNALLY. In frictions.

[Volatile Oil of Black Mustard. (Magendie.)

To obtain this oil, take 10 kilograms of good black mustard, add 50 or 55 of water, and introduce into an alembic. Distil and condense with water.

This oil is employed in frictions, is an excellent rubefacient, and acts almost instantaneously. "It is preferable to ammoniacal preparations. It possesses a strong, disagreeable odour." (*Magendie's Formulary*, Seventh edition. Paris, March, 1835).

I insert the following new remedy in this place, as it was announced after the preceding part of this Formulary was printed. T.]

[Lactic Acid. (Magendie.)

This is a solvent of aliments in the stomach, and is used by Magendie in dyspepsia and indigestion.

Lactic Lemonade.

R_x. Acidi lactici, 3 i—iv;
Aquæ fontis, Oj;
Syrupi simpl. 3 ij.

To be made into lozenges of half a drachm each, which are kept in closely stopped phials.

The lactic acid rapidly dissolves calculi of the phosphate of lime, which are white.

The lactates of soda, potass, &c., have not as yet been tried by M. Magendie; but he

recommends them to practitioners. (*Op. cit.* March, 1835).]

ORANGE LEAVES

Tonics, stimulants, and antispasmodics. In small quantities they are used in nervous affections, such as convulsive coughs, hysteria, &c. In large doses they are recommended in epilepsy. [Seldom used in this country. T.]

INTERNALLY. *Powder.* As an antiepileptic. \mathfrak{D} i— \mathfrak{z} i progressively, in boluses, or in the form of an electuary, with honey.

Infusion. As an antispasmodic. No. iv—x to Oij of water.

Decoction. No. xxx—xxxvi to Oij of water.

Infusion of Orange Leaves. Hot. D. and de la Ch.

R_x. Foliorum aurantii, \mathfrak{z} ij;
Aque ferventis, Oij;
Macerata et cola.

Dosis, cyathus ter quaterve indiæ.

ORANGE FLOWERS.

Slightly stimulating: much employed as antispasmodics.

INTERNALLY. *Infusion.* Pinc. i—ij in Oij of boiling water.

Distilled Water. P. \mathfrak{z} i—iv.

Sirop. P. \mathfrak{z} i ad ij.

Oil. P. Gutt. ij ad vj.

Confection. P. q. v.

MARSH-MALLOWS (FLOWERS).

Antispasmodic and slightly diaphoretic. They are in daily use in a great number of diseases, and especially in nervous affections.

[They are seldom employed in the British dominions. T.]

INTERNALLY. *Infusion.* Pinc. i—ij in Oij of boiling water.

The *Infusion of Marsh-mallows* of the H. de Paris contain \mathfrak{z} ij of marsh-mallows to Oij of water.

Distilled Water. P. \mathfrak{z} ij—iv, as an ordinary vehicle for antispasmodic and other potions.

Infusion of Marsh-mallows and of Orange Flowers. H. de la Mat.

R_x. Infusi althææ, Oij;
Aq. destil. flor. aurant. \mathfrak{z} ij;
Etheris sulphurici, \mathfrak{z} ij.

Misce.

Taken in small cupsful when hot.

The **ROOTS OF PRONY** were formerly considered as antispasmodics: they were administered in powder, in doses of \mathfrak{z} ss to j. At the present day they are not used. There is a *Distilled Water*, from the leaves of this plant, in the *Codex*, which is frequently used as a vehicle for sedative potions.

CAJUPUT OIL.

A stimulant and energetic diaphoretic, acting also as an antispasmodic. It is employed in neurosis of the stomach, hysteria

and other nervous disorders, chronic rheumatism, &c. It is used externally in frictions, to ease the pains in gout and rheumatism.

[It was used in the blue cholera, without success. T.]

INTERNALLY. Gutt. iv—viij, and even more, in sugar, or dissolved in alcohol, in a potion.

Stimulant Drops. H. of Germ.

R_x. Olei cajuputi, \mathfrak{z} ss;
—cornu cervi, \mathfrak{z} j.

Misce.

Guttæ v—xv ex cyatho aquæ sumantur.

Stimulant Emulsion. (Swediaur.)

R_x. Olei cajuputi, \mathfrak{z} j;
Mucilaginis acaciæ, \mathfrak{z} iij;
Aque, \mathfrak{z} iv.

Fiat emulsio, cujus sumatur cochl. min. pro dosi.

EXTERNALLY. In frictions, q. q. mixed with an equal quantity of olive oil.

YELLOW AMBER.

An excitant. It is said that it possesses antispasmodic properties. It is not much used at the present day.

INTERNALLY. *Tincture.* P. Gutt. x— \mathfrak{D} i, in a potion.

Essential Oil. P. Gutt. iv—vi.

EXTERNALLY. *Essential Oil.* P. In frictions on parts affected with rheumatism.

SUCCINIC ACID was formerly used as an antispasmodic: it is not much employed at present.

Sirop de Karabe. P., which is added to antispasmodic potions, in doses of \mathfrak{z} ij— \mathfrak{z} i.

HARTSHORN.

In large doses it is an active poison; in smaller ones it is a stimulant and antispasmodic. It is not much used at present.

[It is frequently employed in this kingdom in syncöpe, hysteria, and other spasmodic disorders.

INTERNALLY. Gutt. v—xv, in sugar, or in a potion.

CHAPTER XI.

MEDICINES EMPLOYED AS SEDATIVES OF THE NERVOUS SYSTEM, NARCOTICS, &c.

OPIUM.

IN small doses it diminishes sensibility and produces a state of calmness, which brings on sleep; in larger ones it acts as a stimulant, and exhilarates the intellectual faculties, but afterwards brings on general weakness and a disturbed sleep; in fine, in large doses it is a very violent poison, which acts principally on the brain. It is very frequently used to allay acute pain, to cause sleep, and to diminish sensibility in a number of cases, and especially in chronic dis-

eases. It is employed with advantage in diarrhoea and cholera maligna, neuralgia, &c.

[This medicine has been long employed to allay pain in chronic diseases, and is contra-indicated when there is cerebral affection or constipation. It is only of late years that its chemical composition was fully ascertained, and that its sedative and stimulant properties were explained. This substance and its sedative preparations are perhaps more generally employed than any other medicine in the materia medica. T.]

Subst. incomp. Ammonia, the carbonates of soda and potass, the oxymuriate of mercury, the nitrate of silver, the acetate of lead, the sulphates of copper, iron and zinc, the infusion of galls and of yellow cinchona bark.

INTERNALLY. *Opium purif.* or *Laudanum.* P. Gr. $\frac{1}{4}$ —ij.

Aqueous Extract. P. The same doses.

Extract prepared by Fermentation. P. The same doses.

Dover's Powder. P. Gr. v—x, and even more. (Gr. 10 contain gr. 1 of opium, and the same quantity of ipecacuanha).

Pilules de Cynoglosse. P. Gr. ij—vi, and more. (Gr. 9 contain gr. 1 of opium).

Theriac. P. Gr. xij—3ss. (3j contains a little less than gr. $\frac{1}{2}$ of opium).

Diascordium. P. 3ss—i. (3j contains gr. 6-7ths of opium).

Teinture. P. Gutt. vi—xx, in a potion. (24 gutt. weighing gr. 12, contain gr. 1 of opium).

Laudanum Liquide de Sydenham. P. Gutt. x—xx, in a potion. (20 drops weigh about gr. xv, and contain gr. 1 of opium).

Laudanum de Rousseau. P. Gutt. ij—viij. (Gutt. 7 contain gr. j of opium).

Sirup. 3ij—iv, in a potion. (3j contains gr. 2 of opium).

Compound Powder of Chalk with Opium.
H. of England.

Rx. Cretæ preparatæ, 3ij;
Cinnamomi corticis, 3j;
Tortmentillæ radicis,
Acaciæ gummi, ā ā 3vi;
Piperis longi fructus, 3i.

Separatim in pulvèrem subtilissimum tere dein adjice,

Pulveris opii, gr. xxxiv.

Dosis, gr. xij—3i.

In diarrhoea. Much used to stop purging dependent on dentition of children. (3i contains gr. $\frac{1}{2}$ of opium).

Sedative Powder. H. of Germ.

Rx. Opii pulveris, gr. i;
Potassæ nitratis, gr. xij;
Sacchari purif. 3ij.

Divide in chartulas vi, quarum sumat unam secundà quâque horâ.

Pills of Soap and Opium. H. of England.

Rx. Opii contriti, 3iv;
Saponis duri, 3ij.

Gr. v contain gr. i of opium.

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Thebaic Pills. H. of Edinb.

Rx. Opii pulveris, 3i;
Pimentæ baccæ, 3ij;
Extr. glycyrrhizæ, 3vij.

Soften the opium and the extract of liquorice with a little diluted alcohol, then mix and add the Jamaica pepper pulverized. The dose is from v to x grs. (10 grs. contain 1 gr. of opium).

Pills of Opium and Ipecacuanha. H. of England.

Rx. Pulveris opii,
—— ipecacuanhæ, ā ā gr. i;
Confectionis rosæ caninæ, q. s.

Fiant pilulæ ij.

Pills of Opium and Antimony. H. of England.

Rx. Opii pulveris, gr. ij;
Antimonii tartarizat., gr. i;
Theraciæ, q. s.

Fiant pilulæ iv, quarum sumat unam vel duas quotidie.

Sedative Pills. Hot. D.

Rx. Extracti opii,
Antimonii sulph., ā ā gr. ij;
Potassæ nitratis, gr. iv.

Fiat massa, in pilulas viij distribuenda quarum capiat ij ad iv in die.

Employed in certain rheumatic affections.

Anodyne Pills. Hot. D.

Rx. Extracti opii, gr. iij;
Camphoræ, gr. vi;
Syrupi simplicis, q. s.

Fiant pilulæ vi, de quibus sumat unam ad tres quotidie.

In certain cases in which there is insomnolence.

Confection of Opium. H. of England.

Rx. Opii duri, 3jss;
Piperis longi, 3ij;
Zingiberis, 3iv;
Carui seminum, 3vi;
Syrupi simplicis, 3iv.

Fiat confectio, cujus sumat gr. xij, ad 3ss pro dosi. (Gr. xxxv contain gr. i of opium).

[The formula of the Lond. Pharm. directs four times the quantity of the ingredients. T.]

Black Drop. H. of England.

Rx. Opii pulveris, 3ij;
Omphacii, 3xij;
Nucis moschatæ, 3iij;
Crocii, 3ss.

Coque et adde,

Sacchari, 3ij;
Spumæ cerevisiæ, cochl. min. ij.

Let these ferment for seven or eight days; filter and keep it in phials well corked.

The dose is from gut. ij to vj, in a potion. (Six drops are equivalent to 1 gr. of opium).

[The preceding formula is extremely inaccurate, as will appear by the following, which is the genuine prescription for the Black Drop, by the original inventor Edward onstall, a medical practitioner at Bishop's

Aukland. It was given by a relative of the family to the late Dr. Armstrong, of London, when he resided at Sunderland, and published by him in his work on Typhus, 1816.

"Take half a pound of opium sliced; three pints of good verjuice; one and a half ounce of nutmegs; half an ounce of saffron. Boil them to a proper thickness, then add a quarter of a pound of sugar and two spoonfuls of yeast. Set the whole in a warm place near the fire for six or eight weeks, then place it in the open air, until it become a syrup; lastly, decant, filter and bottle it up, adding a little sugar to each bottle." Though this remedy has been extensively employed by physicians for nearly a century and a quarter, (for it was introduced about the year 1716) and is still a favourite medicine, it never obtained a place in the London, Dublin, or Edinburgh Pharmacopœia. An attempt has been made by Mr. Battley to supersede it, by the liquor opii sedativus; and next by the Dublin College of Physicians in their pharmacopœia, 1826, (Acetous solution of opium); but I have never observed such uniform and beneficial effects from either of the proposed substitutes, as from that which both were intended to supersede. T.]

Sedative Looch. H. des Ven.

Rx. Laudani liquid. Sydenham. gut. xv—xxx;

Mucilag. acaciæ, ʒ v;

Aq. flor. aurantii, ʒ ij.

The dose is a table spoonful in the evening, and repeated until the desired effect is produced.

Potion of Opium. H. of England.

Rx. Tincturæ opii, gut. xx;

Aquæ menthæ piperitæ, ʒ v;

Aquæ, ʒ iij.

Fiat haustus, cujus sumat cochl. mag. singulis horis.

The mixture with opium of the English Hospitals, is composed of ʒ iij of water, ʒ i of the tincture of opium, and ʒ vj of peppermint water. The dose is ʒ ss—jss, twice or thrice a day.

Potion of Gum with Opium. H. de la Ch.

Rx. Mucilag. acaciæ, ʒ iv;

Syrupi opii, ʒ ss;

Misce, dosis cochl. mag. singulis horis.

Emeto-anodyne Mixture. M. de Santé.

Rx. Laudani Sydenham,

Etheris sulphurici, ā ā ʒj;

Antimonii sulphuret. gr. ij;

Syrupi simplicis, ʒ j;

Aquæ fontanæ, ʒ iv;

Dosis, cochl. mag. singulis horis.

As a sedative and expectorant.

Compound Looch. Hôt. Dieu.

Rx. Extracti opii, gr. j;

———— cinchonæ, gr. iv;

Camphoræ, gr. vi;

Emulsion, amygdalæ ʒ iv.

Sit mistura, de qua capiat cochl. ampl. urgenti tusse.

In catarrh, accompanied by violent or troublesome cough.

Theriac Medicine. M. de Santé.

Rx. Theriacæ, ʒjss;

Gummi acacæ. ʒ i;

Syrupi simplicis, ʒ j;

Aquæ fontanæ, ʒ vj.

Fiat mistura, cujus sumat cochl. mag. pro dosi.

Employed as a tonic and sedative.

EXTERNALLY. Gr. vi ad xij, and even more, dissolved in water, to be added to fomentations or to cataplasms.

Liquor Opii (Sydenham). P. In friction, and with water in fomentations, lotions, collyria, &c.

Collyre Opiacé. P. q. v.

Liniment with soap and opium. P. q. v.

(T. opii ʒ j, sap. amygdal. ʒ ss, ol. olivæ, ʒ ij).

Anodyne Collyrium. H. of Germ.

Rx. Extracti opii, gr. j;

Camphoræ sol. in ol. gr. ij;

Mucilag. mali cydoniæ, ʒ j;

Aquæ rosæ, ʒ ij.

Fiat collyrium.

Employed in painful ophthalmia.

Collyrium with Opium. H. des Enf.

Rx. Liquoris opii (Sydenham),

Croci, ā ā ʒ j;

Decocti lini ferventis, ʒ iv.

Macera et cola.

Used in the same cases as the preceding.

Another of the same Hospital.

Rx. Extracti opii, ʒ ss;

Aquæ, Oj.

Misce.

Employed in cases of ophthalmia, accompanied with great increase of sensibility.

The Collyrium with opium of the H. de la Ch. contains only gr. ij of the extract.

[The vinum opii of the former Lond. Pharm. was a valuable remedy in chronic ophthalmia, but the London College have substituted spirit for wine, and designate the preparation as formerly!! T.]

Sedative Gargle. (Swediaur).

Rx. Extracti opii, ʒ j;

Aquæ ferventis, Oj.

Misce et adjice,

Spiritus rectificati, ʒ j.

Fiat gargarisma.

Employed with advantage in painful ulcerations of the throat and tongue.

Collutoire Opiacé. H. Militaires.

Rx. Tincturæ opii, ʒ j;

Syrupi mellis, ʒ iijss.

Misce.

Employed in the same cases as the preceding.

Sedative Liniment. (Ryan).

Rx. Liniment camph. c. ʒ ij—iv;

Tincturæ opii, ʒ ij—iv.

Misce.

[I have used this liniment in frictions on the cheeks, nape of the neck, dorsal spine, and chest, in whooping cough, with great success; and also on the cheek during dentition and facial neuralgia from toothache in adults. It will be found beneficial in rheumatismal and neuralgic pains in different parts of the body. T.]

Narcotic Fomentation. Hôt. D.

Rx. Opii, 3 ij;

Aquæ, ℥j.

Fiat lotus.

Anodyne Cataplasm. Hôt. D.

Rx. Liqueoris opii (Sydenham), 3 j;

Cataplasmatis lini, ℥j.

Misce in usum.

Employed in cases of phlegmasia accompanied with acute pains.

Anodyne Liniment. H. de la Ch.

Rx. Extracti opii, 3 iij;

Unguenti althææ, 3 j;

Balsami tranquilli,

Olei amygdalar., ā ā 3 ij.

Fiat linimentum.

Used in frictions on painful parts.

Sedative Liniment. H. de la Ch.

Rx. Tincturæ opii, 3 iv;

Camphoræ, 3 ij;

Olei amygdal. dulcis, 3 ij.

Misce.

The *Liniment opiacé* of the same hospital contains 3 ij of laudanum and 3 iv of the acetate of lead, with the same quantity of the oil of sweet almonds.

Narcotic Liniment. Hôt. D.

Rx. Liqueoris opii (Sydenham), 3 j;

Balsami Fioravanti, 3 ss;

——— tranquilli, 3 j.

Misce.

Another narcotic liniment of the same hospital is composed of 3 ss of laudanum to 3 iv.

Liniment Opiacé. Hôt. D.

Rx. Liqueoris opii, 3 j—ij;

Olei olivæ, 3 iv;

Saponis medicinalis, 3 ss.

Misce.

The *Liniment opiacé* of the H. des Ven. does not contain the soap, but a double quantity of laudanum.

The *Liniment opiacé* of the H. des Enf. differs only from that of the Hôt. D. by the absence of the soap.

In the *Liniment opiacé* of the H. St. Ant. the laudanum is replaced by the same quantity of opium.

Pommade employed in Neuralgia of the Face.
H. de la Ch.

Rx. Opii, 3 j;

Plumbi subcarbonatis, 3 j;

Adipis, 3 ss;

Balsami tranquilli, q. s.

Fiat unguentum.

Frictions should be made with this pommade on the affected parts.

Pommade Opiacé. H. des Ven.

Rx. Pulveris opii, 3 j—ij;

Cerati simplicis, 3 iv.

Fiat unguentum.

Employed to dress painful wounds or ulcers, or as an unction upon certain pustules and venereal tumours.

The *Cerat opiacé* of the H. des Enf. contains 3 j of laudanum to ℥j of simple cerat.

Sedative Suppository. H. of America.

Rx. Opii, gr. ij;

Saponis duri, 3 j.

Misce.

POPPY CAPSULES.

Narcotics, possessing the same virtues as opium, but in a far less degree. They are employed in the same cases as that medicine.

INTERNALLY. *Decoction.* No. j or ij to Oij of water.

Extract of Poppies. P. ʒj—3 j, in pills.

Syrup of Poppies. P. 3 ij—3 jss, in a potion; 3 j is equivalent to gr. i of opium.

Calmant Potion. Hôt. D.

Rx. Syrupi papaveris, 3 j;

Aquæ flor. aurantii, 3 ij;

Mucilag. acaciæ,

Infusi pectoralis, ā ā 3 j;

——— tilisæ, 3 ij;

Syrupi simplicis, 3 ss.

Dosis cochl. mag. sæpe in die.

Much used in cases of violent pain in any part, convulsions, &c.

Anodyne Potion. Hôt. D.

Rx. Aquæ aurantii, 3 j;

——— melissæ, 3 iij;

Syrupi simplicis, 3 j;

——— papaveris, 3 ss—j.

Dosis cochl. mag.

The *Potion Calmante* of the H. des Enf. is similar to the above mixture.

EXTERNALLY. *Decoction.* No. ij—iv to Oij of water, in lotions, fomentations, local baths, &c.

Sedative Gargle. H. des Ven.

Rx. Papaveris capsularum, No. ij;

Seminum lini, 3 j;

Aquæ ferventis, 3 vj;

Syrupi mellis, 3 ij.

Fiat gargarisma.

Employed to calm pains which are present in certain cases of syphilitic angina, &c.

Sedative Gargle. M. de Santé.

Rx. Syrupi papaveris, 3 j;

Decocti amyli, 3 viij.

Employed in painful angina.

(To be continued.)

Résumé.

Traité des Hémorrhagies Internes De l'Uterus, &c. Par A. C. Baudelocque, M.D., &c. Bruxelles, 1832. *Treatise on Internal Uterine Hæmorrhages.* By A. C. Baudelocque, M.D., &c. Brussels, 1832.

(Concluded.)

HAVING given, some numbers back, a pretty full analysis of the first chapter of this valuable and practical work, we shall only have room to notice so much of the remainder as relates to points of particular importance or difficulty. In the last section of the third chapter we find some interesting remarks on the diagnosis of *utero-peritoneal hæmorrhage*—a case not of frequent occurrence, but of difficult detection when it does occur. When this accident happens during gestation, it is indicated by the symptoms attendant on large loss of blood, with violent pain in the abdomen, which at first is usually confined to a particular spot, but soon extends, and is accompanied with fainting, intermittent, and sometimes extremely rapid pulse, vomiting, pallor and coldness of the surface, speedily followed by death—previous to which the pain generally ceases. When the extravasation proceeds slowly, and there is time for inflammation to extend over the surface of the peritoneum, the diagnosis becomes very obscure from the union of symptoms of peritoneal inflammation with those arising from loss of blood.

An interesting case of this kind has been recorded in the memoir of M. Breschet.

— Fonchaux, a servant, aged 34 years, of fine stature, well made, and of a sanguineo-nervous temperament, was admitted into the Hôtel Dieu on the 21st of July, 1825. M. Dance, at that time a house-pupil, supposed from the appearance of the patient that she laboured under acute peritonitis. She stated that she had been married at the age of 18, and had borne three children before the age of 24. Her labours had been easy, and she had always enjoyed good health. For about three months the menses had been suppressed, but she was convinced that this was unconnected with pregnancy. At the menstrual periods she had experienced pain in the lumbar region, and uneasy sensations in the hypogastrium,

but her general health was not impaired. On the 20th of July she went about her ordinary avocations without any feeling of indisposition. Being sent on an errand at one o'clock, P.M., she was suddenly seized, on her way home, with pain resembling colic, succeeded by syncope, which continued for an hour. She was carried to a neighbouring house, where she recovered from the state of fainting, but remained pale and exhausted, with increasing pain in the abdomen. During the night she suffered great anguish, and was restless, but with occasional intervals of sleep. She had some vomiting, which, however, soon ceased, and did not recur. The bowels were confined, and the urinary secretion suppressed. There was a small discharge of blood *per vaginam*. A physician who was sent for merely prescribed a quieting draught.

M. Dance first saw her on the 21st of July, about two in the afternoon, at which time her physiognomy was that of abdominal disease. The face was pale, the surface cold, the eyes dull and sunk, lips livid, voice feeble, intellectual functions unimpaired; the abdomen was tumid and tender over its whole surface, particularly in the iliac regions; the pulse threadlike; tongue pale, and whitish in the centre; much thirst; no vomiting. In this case the tumid and painful state of the abdomen indicated acute peritonitis, but the sudden accession of such alarming symptoms in a young person previously in good health was not easily accounted for. Was the peritonitis secondary on a sudden perforation of the stomach or intestines, and effusion of their contents? No symptoms of disease in these organs had previously existed. Was the case one of abortion, which the patient desired to conceal? The suspicion that this might be the fact induced M. Dance to examine. The result was that he was convinced she was pregnant, but he observed that there was no blood on the end of the finger when it was withdrawn. He intended to empty the bladder, in order to examine the state of the uterus more accurately; but deferring this till his evening visit, he prescribed leeches and emollient fomentations. He had only just left the room when the patient expired.

On inspecting the body twenty-four hours

after death, the cavity of the abdomen, and especially of the pelvis, was found full of clotted blood: about five or six pounds of blood appeared to have been effused. Blood was also infiltrated between the layers of the mesentery and under the peritoneum. The details of an interstitial conception which was found to have occurred, are omitted by the author, as foreign to the immediate illustration of the subject.

The fifth and last chapter is on the treatment of which the prophylactic part constitutes the most important subject of consideration. Internal uterine hemorrhage sometimes occurs without apparent cause, or supervenes so immediately upon the cause, that art is of little avail in its prevention; but when symptoms of uterine congestion merely are present, active practice will often prevent further mischief. The following case occurred to Delamotte:—

A large window-shutter fell on the abdomen of a woman three months' gone with child, and occasioned violent pain, which was followed by a slight hemorrhage. It is singular that the patient found she lost more blood in the recumbent posture than when sitting or standing. She was therefore desired to avoid the recumbent position, but to keep perfectly quiet, and she was twice bled from the arm. The bad symptoms disappeared, she reached her full time, and was delivered of a healthy boy.

M. Baudelocque considers blood-letting particularly applicable in cases of internal hemorrhage occasioned by violence. The following is a case illustrative of its application.

Madame C——, 21 years of age, of a nervous and lymphatic temperament, was used to experience colic and renal pains at the periods of menstruation, which usually lasted five days. She miscarried twice during the first year after her marriage, in both instances at the twelfth menstrual term. Three months after the second abortion, conception again took place, between the 17th and 20th Nov. 1814. She immediately abstained from carriage exercise, sexual intercourse, and stimulating articles of diet. On the 9th Dec. she looked pale and hollow-eyed, her pulse was feeble and there was tension of the hypogastrium. These symptoms gradually disappeared af-

ter continuing five or six days. On the 7th Jan. she experienced some pain in the loins on the 8th, the whole surface of the body was discoloured, and the roots of the nails of a violet hue; the eyes were sunk, the extremities cold, the hypogastrium tumid and tense, and the pulse extremely small; the colic pains continued at intervals. M. Deneux ordered four ounces of blood to be drawn from the arm. The pulse rose, the temperature of the body became more equal, the pains and tension of the hypogastrium diminished and had disappeared by the following day. A repetition of the same symptoms took place on the 5th of Feb. Bleeding was again prescribed, but deferred at the instance of the patient's friends. On the 7th, she had, in addition to the former symptoms, a sense of weight about the rectum, pain in passing the urine, pain in the hypogastrium and oozing of blood from the vagina. The colic and lumbar pains increased, the os uteri was tumid and painful to the touch, and the parietes of the vagina were swelled, tender, and hot.

M. Deneux abstracted a small quantity of blood and prescribed entire repose, chicken-tea, infusion of linden-flowers, and emollient enemata. In consequence of this treatment she passed a good night, and next day was nearly as well as usual.

The same symptoms occurring in a minor degree were again obviated by venesection, and on the 1st July (being the eighth menstrual period) blood was again drawn for a pulmonary congestion. This lady was safely delivered at the full time, and has since borne two children without being bled during her pregnancy. Our author observes that too much blood should not be drawn at once, since he has seen many instances in which too copious venesection was fatal to the child—this result sometimes follows if syncope be induced, hence it is prudent to bleed pregnant women in a recumbent posture, to diminish the likelihood of fainting.

We regret that we cannot further extend our review of this very excellent work; the practitioner will find it to contain a great number of interesting cases in obstetrics, connected by highly judicious and practical observations.

The Surgeon's Practical Guide in Dressing and in the Methodic Application of Bandages. Illustrated by numerous Engravings. By Thomas Cutler, M.D., late Staff-Surgeon in the Belgian Army. 12mo. pp. 195. London: J. Taylor.

Few students or practical surgeons pay proper attention to the methodic application of bandages, though of great value in practice. The fault, however, lies with the professors of surgery, who scarcely ever notice the minor operations or mechanical means of their art. They seem to suppose that students are to learn the performance of the minor operations by intuition; while they forget the great responsibility incurred by the future surgeon in setting a broken limb badly, and incurring the infliction of heavy damages for such malpractice. The omissions of public teachers are at length being supplied by many experienced contemporaries of equal talent, though of less celebrity. We have now manuals on different branches of medicine, which contain as much, and indeed often more, than systematic works. The work before us is of this description. The author has collected his materials from the best surgical works, and from personal observation in the British and Continental hospitals. He has illustrated the proper application of bandages according to the regions of the body, and given wood-cuts of those of the head, neck, trunk, upper and lower extremities. There are 100 wood-cuts and four lithographic plates, illustrative of bandages, pullics, &c.

Dr. Cutler has accomplished his object in a very satisfactory manner. The work is a very valuable pocket manual to the student, the general practitioner, to the army, navy, and hospital surgeon. Moreover it is published at one-third of the price of the only other British work on the subject.

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The Constitution of Man, considered in relation to External Objects. By George Combe. Henderson Edition. Price 2s. 6d. 12mo. pp. 446. Edinburgh: J. Anderson. 1835.

We give the price of this admirable work, as it is so moderate that every individual may possess it. It appears that a Mr. Henderson, a sincere phrenologist, left a certain sum "for the advancement and diffusion of the science of phrenology, and the practi-

cal application thereof," and recommended his trustees to publish a cheap edition of the work before us, "so as to be easily purchased by the more intelligent individuals of the poorer classes, and mechanic institutions. And I think it proper here to declare, that I dispose of the residue of my property in the above manner, not from my being carried away by a fit of enthusiasm, but from a deliberate, calm, and deep-rooted conviction, that nothing whatever hitherto known can operate so powerfully to the improvement and happiness of mankind, as the knowledge and practical adoption of the principles disclosed by phrenology, and particularly of those which are developed in the *Essay on the Constitution of Man* above mentioned." The trustees have accordingly assigned a sum for the publication of the present work in a cheap form, and faithfully fulfilled the intention of the testator. The ordinary selling price of this volume would be about six shillings, and it is now offered for half-a-crown. It is called the Henderson edition, to distinguish it from a separate, finer, and more expensive impression intended for sale to the general public; and those who desire to obtain the cheap edition are directed to order it by this appellation.

The author acknowledges that he lays no claim to originality, and that his materials have been employed again and again, by writers on morals, from Socrates down to the present day. The following extract places his claims before our readers.

"The only novelty in this *Essay* respects the relations which acknowledged truths hold to each other. Physical laws of nature, affecting our physical condition, as well as regulating the whole material system of the universe, are universally acknowledged, and constitute the elements of natural philosophy and chemical science. Physiologists, medical practitioners, and all who take medical aid, admit the existence of *organic laws*; and the sciences of government, legislation, education, indeed our whole train of conduct through life, proceed upon the admission of laws in morals. Accordingly, the laws of nature have formed an interesting subject of inquiry to philosophers of all ages; but, so far as I am aware, no author has hitherto attempted to point out, in a combined and systematic form, the relations between these laws and the constitution of man; which must, nevertheless, be done before our knowledge of them can be bene

ficially applied: nor has any preceding author unfolded the independent operation of the several natural laws, and the practical consequences which follow from this fact. The great object of the following Essay is to exhibit these relations and consequences with a view to the improvement of education, and the regulation of individual and national conduct.

"But although my purpose is practical, a theory of mind forms an essential element in the execution of the plan. Without it, no comparison can be made between the natural constitution of man and external objects. Phrenology appears to me to be the clearest, most complete, and best supported system of human nature, which has hitherto been taught; and I have assumed it as the basis of this Essay. But the practical value of the views now to be unfolded does not depend entirely on phrenology. The latter, as a theory of mind, is itself valuable, only in so far as it is a *just exposition* of what previously existed in human nature. We are physical, organic, and moral beings, acting under the sanction of general laws, whether the connection of different mental qualities with particular portions of the brain, as taught by phrenology, be admitted or denied. Individuals, under the impulse of passion, or by the direction of intellect, will hope, fear, wonder, perceive, and act, whether the degree in which they habitually do so be ascertainable by the means which it points out or not. In so far, therefore, as this Essay treats of the known qualities of man, it may be instructive even to those who condemn phrenology as unfounded; while it can prove useful to none, if the doctrines which it unfolds shall be found not to be in accordance with the principles of human nature, by whatever system these may be expounded."

The distinguished author has wisely avoided all religious controversy. He has imitated the brilliant examples of Dugald Stewart, Dr. Hutcheson, Dr. Adam Smith, Dr. Reid and Dr. Thomas Brown; and pursued their plans "with the new lights afforded by phrenology." He also desires it to be understood, that his observations are exclusively confined to man, as he exists in the present world. His work does not embrace "the interests of eternity." "These belong to the department of theology, and demand a different line of investigation. I confine myself exclusively to moral philosophy." It would be well if other phrenologists so limited their views, and not confounded mind and soul as they have done. Mr. Combe goes on to shew that his conclusions are those inculcated in the university of Cambridge.

"In 'A Discourse on the Studies of the University, by Adam Sedgwick, M.A. &c.' of which a third edition was published at Cambridge in 1834, the author remarks, that 'we are justified in saying, that, in the moral as in the physical world, God seems to govern by general laws.' 'I am not now,' says he, 'contending for the doctrine of moral necessity; but I do affirm, that the moral government of God is by general laws, and that it is our bounden duty to study these laws, and, as far as we can, to turn them to account.' 'If there be a superintending Providence, and if His will be manifested by general laws operating both on the physical and moral world, then must a violation of these laws be a violation of His will, and be pregnant with inevitable misery.' 'Nothing can, in the end, be expedient for man, except it be subordinate to those laws the Author of Nature has thought fit to impress on his moral and physical creation.' 'In the end, high principle and sound policy will be found in the strictest harmony with each other.'

"These are precisely the views which it is the object of the present work to enforce; and it is gratifying to me to see them so ably and eloquently recommended to the attention of the students of the University of Cambridge."

We have only room for the insertion of the contents of this delightful volume. These are—general view of the constitution of human nature and its relations, to external objects—on natural laws—on the constitution of man and its relations to external objects—on the sources of human happiness, and the conditions requisite for maintaining it—application of the natural laws to the practical arrangements of life—to what extent are the miseries of mankind referable to infringements of the laws of nature—on punishment—on the combined operation of the natural laws—influence of the natural laws on the happiness of individuals—on the relation between science and scripture—conclusion—appendix—natural laws—organic laws—hereditary transmission of qualities—laws relative to marriage and education in Germany—death—infringement of the moral laws. Here are subjects for meditation and reflection, which interest every rational individual. Moral philosophy is a science of deep interest to our profession, as well as to the public; and we strongly advise our junior as well as our senior friends, to study it in this comprehensive and splendid little work. Every member of the profession ought to possess it, phrenologists and anti-phrenologists.

The Pathology and Diagnosis of Diseases of the Chest. Illustrated especially by a rational Exposition of the Physical Signs, with new Researches on the Sounds of the Heart. By Charles J. B. Williams, M.D., &c. &c. Third Edition, much enlarged. Plates. 8vo. pp. 209. London: J. Churchill. 1835.

THE excellence of this work has secured it a large circulation. The author has arranged all that is known of auscultation in relation to diseases of the chest and heart, in a concise and perspicuous manner; and enabled the student and practitioner to acquire a perfect knowledge of these subjects with ease and pleasure. This work contains every conclusion and fact on the diagnosis of the diseases of the chest and heart in the last edition of Laennec; and published at nearly a third of the expense. The gratifying manner in which the former editions were received, has induced the author to revise the whole with the greatest care. He has also given a new version of the auscultation of the heart, and of the causes of the different sounds afforded by the chest. This work is in our opinion, the best on the subject in our language. It comprises many important facts discovered since the decease of the great Laennec; and should be a source of reference to every medical practitioner. We would, however, suggest to the able author, the necessity of including the auscultation of the abdomen as in pregnancy, of urinary calculus, &c., in his next edition.

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Anatomical Description of the Parts concerned in Inguinal and Femoral Hernia, translated from the French of M. Jules Cloquet, with Lithographic Plates and a few additional Explanatory Notes. By Andrew Melville M'Whinnie, Assistant Teacher of Practical Anatomy at St. Bartholomew's Hospital. 8vo. pp. 48. Plates. London: Highley. 1835.

Few subjects are more important to the surgeon than the anatomy of the parts concerned in hernia, and we cannot be surprised at the great number of distinguished writers who have illustrated it. It is scarcely necessary to remind the reader that Mr. Guthrie has recently published new views of the anatomy of herniæ; and we know that Dr. Alexander

Thomson has been engaged for some years in the hospitals and anatomical theatres of Paris in preparing materials for a full history of this branch of surgical anatomy, to be illustrated by numerous engravings, which have received the highest praise from our Gallic contemporaries, and many of our countrymen. The essay before us is one of value, and should be placed by the side of Mr. Guthrie's recent work in the surgical library. It is well translated, and enriched by many instructive notes by Mr. M'Whinnie.

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The London Medical

AND

Surgical Journal.

Saturday, April 18th, 1835.

INCOMPREHENSIBLE STATE OF THE PROFESSION.

OUR contemporary the *Lancet*, in last week's number, animadverts with much justice on the ignorance exhibited by the non-medical press of everything connected with the organization of the medical profession*, and attributes it to its true cause, the perplexing multiplicity of colleges and corporations, whose edicts, neutralising, confounding, and stultifying each other, form a mass of contradiction and absurdity equally embarrassing to the profession and unintelligible to the public.

We never could, even by the most laborious exposition, make any one of our lay friends comprehend either the subdivisions of the profession, or the constitution of those august bodies which legislate ostensibly *for*, and actually *against* it. Some things the public cannot be brought to understand, and others they refuse to believe. When, for instance, a man hears of fellows—candidates—ceptor candidates—licentiates—independents—pure surgeons—surgeons impure—surgeon apothecaries

* Some part of the *Lancet's* remarks have special reference to a particular journal, which ours have not.

—pure apothecaries; he at once gives up the natural history of doctors as a department of zoology too deep for persons of ordinary capacity.

Again, when we tell a non-professional man that the institution facetiously called the College of Surgeons consists merely of a council of twenty-two, which is self-perpetuating, and that many thousand persons who have past examinations, and paid heavy fees, to become *members* of this college, have no more to do with the college or its concerns than the Shah of Persia, he thinks we are making rhetorical flourishes, and will not believe that a thing at once so exceedingly comical and violently wicked can possibly exist in this or any other country.

A blessed state of things truly, in which folly is concealed by its complexity, and vice becomes incredible from its enormity!

But all this odious mummery, this vile compound of farce and iniquity, must and will fade away before the rapid progress of morals and intelligence. Everything now points to a consummation long anticipated by the clear-sighted, still derided by such as “ne’er look farther forward than their nose;” and most sincerely deprecated by those who derive emolument and importance from the perpetuation of an obsolete and corrupt system.

That consummation is the establishment of one Faculty of Medicine.

So desirable an event will not, however, immediately come to pass. The corporations are at present too much benighted to think of doing anything of the kind of their own accord, and compulsion, we conceive, is altogether out of the question; it would be no more compatible with law or justice to force them to coalesce, than it would be to marry two persons against their will: but the reforms which law, justice, and common sense imperatively demand, and which must soon be either voluntarily adopted, or unceremoniously

enforced, in the separate corporations, will so alter their spirit, that in a few years their coalescence will be their own spontaneous act. The Rhubarb affair at Blackfriars may be put out of consideration; it is, in effect, already null and void, it was sent into the air by a volcanic burst of laughter on the first rumour of a parliamentary inquiry. With respect to the colleges it may be observed, that *surgeon*-physicians are about to be admitted at Pall Mall; and, in spite of the half bullying, half skulking policy of the twenty-two in Lincoln’s Inn, *physician*-surgeons, that is, general practitioners, will ere long be obtruded, albeit as unwelcome coadjutors, into the counsels of the College of Surgeons.

Now, these changes being once effected, the coalescence of the colleges into one medical faculty cannot be delayed for many years. The foundations of the monkish system of medicine will be undermined; physicians will cease to be old women, and surgeons to be mechanics, and the science will rise on the ruins of the trade. The despicable collusions which now go under the name of “a good understanding among the different branches of the profession,” will cease to delude and injure the public; and young practitioners, who are now too often obliged to purchase success by the sacrifice of honour and independence, will find at least an open, if not a fertile field before them—the maxim will be, start fair and the devil take the hindmost: rather a selfish principle it must be allowed, but, nevertheless, the most equitable and the best that can be adopted in matters of public competition.

DR. HANCOCK ON THE PLANT CALLED
KOONUPARN.

*Abstract of a Paper read at a Meeting of the
Medico-Botanical Society, March 10, 1835.*

By the Secretary, Dr. Sigmond.

THE koonuparn is an elegant perennial shrub, indigenous to the interior parts of Guiana. The stem is jointed, and appears like that of cassader. It is usually planted in the provision grounds of the Indians, as they fancy it has a beneficial influence, and hence they often term it, *cassave mamu*. They employ it occasionally to catch fish; for, by bruising and throwing it into the water, the fish are stupified, presently float on the surface, and are taken by hand. It grows to about eight feet in height, and two inches diameter. The stem is jointed, extremely frondose or branchy. It flowers at all seasons of the year, and is constantly covered with leaves—yet it cannot be called an evergreen—for it has constantly a purple colour, or a mixture of green and purple. The foliation is peculiar. Its heart-shaped leaves are tern, or ranged in a most accurate, geometrical series in whorls; so placed, that each whorl, successively forms on the stem, a cord of sixty degrees with that next below; and below, the stems are marked with the vestigia of the fallen leaves.

Its white flowers stand in racemes at the summit of the branches. I have seen only the male plant, for this only has been brought from the interior, and planted by slips in the gardens on the coast. But I have been told by the natives that the fruit has the same form as that of the ricinus, or castor-oil bush. They affirm that one single seed operates as a powerful cathartic, carrying off amazing quantities of water, and thus they speedily cure great swellings, meaning dropsical tumours.

In the male flower.—The calyx is a cup, five-parted.

Corolla.—None.

Nectaries.—A nail or fleshy gland on the divisions of the calyx.

Stamina.—About forty in number; in five bundles, not connate, unequal, involved in a feathery or downy substance, which grows among the stamina.

Anthers.—Twin on each filament, round, red.

Pistillum.—Rudiments of the germ, three-sided.

Style.—Very short.

Stigma.—Six, divided.

The koonuparn or purple bush, seems much allied to the hynanche toxicodendron of Willdenow, but comes nearer, perhaps, to the Hecatea of Persoon. Indeed, I should think it a true species of this genus, although that eminent botanist, Dr. Hooker, has considered it identical with the euphorbia cotinifolia, and given it an accurate figure in his va-

luable work, the "Flora Exotica;" and if it be so, Willdenow's description is worse than useless. Indeed, the disparity is great, for I have compared it with the latter growing at Kew, the colour of which is pale green, and the other purple*. With all deference, however, to the learned professor's skill, I am fully persuaded they are distinct in species if not in genus.

This plant, in respect to its growth, and its sensible or physical properties, is one of the most remarkable, perhaps, of all the natural family of tricocca or euphorbiaceæ. The entire plant is replete with a lactescent fluid, of a pure white, and near the consistence of cream; and so copious is the juice as to trickle down in a small stream when an incision is made, or a branch broken. The fluid has a powerful acrimony, and when tasted, affects the mouth and fauces with a sense of burning, and the flavour of capsicum. Notwithstanding this acrimony, or rather, perhaps, in consequence of it, a tincture prepared from the dried and powdered leaves, forms the most efficacious medicine that I have ever met with. Four drachms of the powdered leaves are infused in six of proof spirit. Of this tincture from five to ten drops are given to the dose, and repeated every four or six hours.

Its sensible operation in a large dose, as twenty or thirty drops, will cause a great horriborismus, or rumbling of the bowels, which is soon followed by a rash or efflorescence like an *essera*, or rather diffused patches, with a slight but sensible elevation of the skin, first about the middle, then extending, more or less, over the whole surface of the body, at the same time attended with an itching or irritating sensation and sweat, and the internal inflammation in the meantime proportionately subsides.

From these facts this medicine evidently appears to act by producing revulsion, or by counter-irritation; giving the humours a tendency to distant parts to the whole surface of the body, and thus it appears to disburden the internal parts, suffering under excessive congestion and inflammation. In fact, a sort of temporary fever of a different kind is induced by this medicine, by which the internal irritation is transferred to the surface, and the vital parts are thus relieved.

But whatever may be regarded as the theory or *modus operandi*, I know of no re-

* I brought home the growing plant and deposited it in the Chelsea Botanic Garden, under the care of that skilful botanist, Mr. Anderson; where, I believe it is now in a thriving condition. The deep purple dye of its foliation was found to remain constant throughout the summer and winter, as Mr. A. informed me. I then presented a dried specimen of this plant to the Medico-Botanical Society.

medy possessing such powers against inflammations as this, and especially when employed in conjunction with moderate bleeding and the vapour bath. This I have seen proved on the coast of Essiquebo, and especially on the estate, Devonshire Castle, when a violent epidemic pneumonia prevailed, when patients in the last stage of the disease, and past all hope, were saved by this medicine, as will be remembered by the manager, Mr. E. Bunbury*.

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Hospital Reports.

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ST. GEORGE'S HOSPITAL.
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Operations.—Extirpation of a large Tumour of the Mammary Gland.

APRIL 9th. A female, past the middle of life, was brought into the theatre, in order to have a large tumour removed from the left breast, the nature of which was doubtful. The tumour appeared to have commenced in the upper and outer angle of the gland, or that nearest to the axilla; it had reached the size of a child's head or more; its surface was of a regular smoothness throughout, and it was highly elastic on pressure; the skin covering it was of a delicate tenuity and very glabrous; through it could be seen numerous large veins, ramifying on the surface of the tumour.

Mr. Keate, who operated, commenced by making the two usual semicircular incisions over the tumour, so as to enclose an elliptical portion of skin on its surface; he then rapidly, with a scalpel, dissected out the tumour from the surrounding gland and adipose tissue, of which latter there was in this situation a rather abundant quantity. In effecting this, many of the nutritious vessels of the tumour, which were of sufficient size to bleed freely, were divided. Eight ligatures were applied, and the edges of the wound brought together with adhesive straps, in the ordinary manner. Compresses of folded linen were superimposed, and the whole secured, by means of a bandage encircling the waist and shoulder.

Upon a section of the tumour, it was found to be of a rather heterogeneous nature, containing a large proportion of adipose tissue, a serous cyst or two, whilst the greater part of it consisted of a tissue, apparently malignant, which alternated with the fatty portion of it. This ponderating element of the tumour was of a grey colour, and pulpy consistence, and was thought to be a modification of the medullary sarcoma of Mr. Abernethy, although it did not agree in every particular, either with that, or any other variety of malignant growths, included in that gentleman's classification.

* Dr. Wallace, the physician, who attended the estate, afterwards candidly told the manager, that these people were most unequivocally saved by this medicine.

Medullary Sarcoma of the Testicle—Castration,

Sir B. Brodie afterwards performed the operation of castration upon a man, who, scarcely more than a year since, had the other testicle removed, we believe at the Brighton Hospital, for a similar disease.

The tumour was of a regular ovoid shape, and about the size of a small cocoa nut; its surface was uniformly smooth, and had a very elastic feel on pressure; on its left side was a linear cicatrix, which indicated the seat of the previous operation. In order to confirm the diagnosis, Sir B. B. has on more than one occasion made a few exploring punctures, which gave issue to nothing but a few drops of blood.

A longitudinal incision was made over the tumour, which was then rapidly separated from its enveloping skin. The epididymis, which was quite healthy, was then divided just as it emerges from the external abdominal ring, Mr. Hawkins holding it, in order to prevent its retraction within the canal. The tumour having been, in this way, removed, the vessels of the cord were in the next place secured with ligatures, as were also a few bleeding vessels on the inner surface of the skin of the scrotum. The edges of the skin, none of which was removed, were brought together, a piece of lint having been previously interposed, and were kept in apposition by adhesive straps. A compress of folded linen was laid over the wound, which was kept in sit by means of a roller applied round the abdomen and thighs.

Upon making a section of the diseased testicle, it was found to consist of a tolerably homogeneous tissue, differing somewhat, as Sir B. Brodie observed, from the ordinary appearance of the medullary sarcoma, and indeed having a rather close affinity to the corresponding tissue in the diseased mamma previously removed by Mr. Keate.

Sir B. Brodie made a few observations upon the constitutional nature of the affections of which these growths are but the external and visible signs, and said, that according to his experience, in five at least, out of every six such cases, the disease reappeared in some other part of the body; very frequently, taking the course of the absorbents, it attacked the lumbar lymphatic ganglia; whilst in other cases the patient was cut off by its development in the tissue of the lungs.

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Congenital Malposition of the Anus—Rectum opening into the Vagina—Operation.

A female child, scarcely more than a year old, was next brought into the theatre, having that form of congenital malformation, in which the rectum, instead of terminating by an external opening, or anus, in the perineum, opens on the posterior wall of the vagina, by which the fæces all constantly

passed; thus making a close approach to the permanent and normal condition of those vertebrate animals, which possess a cloaca, a general cavity into which the grand emunctories of the system severally discharge their contents.

The opening in the vagina was stated by the operator, Sir B. Brodie, to be of just sufficient size to admit the point of the little finger.

The operation to be performed, was to give the child an anus in the natural situation, and the following was done with this view. This will be found to be identical with the operation proposed by Chambon, as stated by Dr. Ryan, in his lectures on the Physical Education of Children, reported in his Journal (Vide No. for Jan. 16th). A curved director was passed by the vagina, through the opening of the rectum, into that gut, and was made to project in the perineum, in the normal situation of the anus. Sir B. Brodie, then cut down carefully upon the point of the director until he made it protrude through the skin; and he afterwards enlarged the opening thus made into the rectum, by cutting cautiously with a probe-pointed bistoury, to a little extent, at each of the four cardinal points. A piece of elastic gum catheter was then passed through this opening into the rectum, and retained there by means of tapes, which were connected to a bandage encircling the loins and thighs of the little patient.

Sir B. Brodie, in making a few observations upon the case after the operation, stated, that it was the only thing that could be done with any prospect of advantage, and that though he felt somewhat doubtful as to its successful result, yet that it was right to let the child have the chance of it. One reason which led him to doubt whether the operation would be of any avail, was, the uncertainty of the existence of any sphincter ani, and should this be absent, of course incontinence of fæces would be the result. In the event of its succeeding, it would be for a future operation, to close the opening into the vagina; but that, of course, must be deferred until the patient has attained such an age, as will, by the proper development of the parts, permit of the requisite manipulations; at which period, the operation by suture, for recto-vaginal fistula must be performed.

NORTH LONDON HOSPITAL.

Acute Inflammatory Dropsy.

SAMUEL NAGLE, labourer, aged 40, of intemperate habits, was admitted, March 9, under the care of Dr. Elliotson. Four years ago, he had swelling of different parts of the body, without any immediate previous illness. About eleven weeks since, he was seized with a violent pain in the back part of the head; and general œdema of the body took place.

The face was also much swelled; it is a singular circumstance that in acute inflammatory dropsies, the œdema begins in the upper extremities; whilst in those cases arising from weakness or obstructions, the swelling generally begins in the ankles, and extends upwards; the cause of this is owing to the difficulty the blood experiences in returning to the heart. The face swells in acute inflammatory dropsy, from its being exposed to heat and cold. He complained of cramps in the limbs, which is a common symptom, and attributes his illness to working in wet clothes; he has a short dry cough, with a slight expectoration of viscid mucus; you will generally find in acute inflammatory dropsy, that there is either pain in the head, or an affection of some of the cavities of the body. He has micturated scantily for four or five weeks; his urine has a violet odour, but its colour is natural; in general, patients do not make less water in this disease than when in health, and its colour is usually natural and without sediment; sometimes more water is made than the person is accustomed to. On examining the chest, we found the respiratory murmur very faint on the right side, and not very distinct in the course of the spinal column. There was not inflammation sufficient in any part affected, to warrant the necessity of blood-letting, but as there seemed a general tendency to inflammation, I ordered him to be bled to five or eight ounces, and gave him,

Rx. Potass. supertart. 3 ss;
Pulv. jalapæ, gr. x.

Statim.

And ordered him low diet.

With regard to the medicine, the supertartrate of potash does not act well alone, but is very efficacious, combined with a small quantity of jalap; a bitter aromatic is also beneficial, as it relieves the flatulence, which is often so troublesome in this complaint. The blood was slightly buffed, and the serum milky, his bowels freely opened by the powder. He has had a little giddiness, and his memory is slightly impaired; this is often a common symptom of giddiness.

19th.—He has been going on very well, having had two or three motions a day.

21st.—His body has increased in size—his urine is more scanty, there is a crepitous rattle distinctly heard in the left lung, and respiration is indistinct—there is also a slight crepitus on the other side. I ordered him to be again bled to 3 iv, and to take 3 i of the supertartrate of potash. I did not think it necessary to alter the method of treatment, but to increase the dose of the medicine.

25th.—He is much reduced in size, and appears to be going on very well. We shall soon be able to ascertain if there be chronic disease of any organ. Had this man lived formerly, it is most likely he would have

been ordered good living, and steel would have been given him, from the theory of the cause of dropsy then being, that it arose from debility. Now, we know that in general, it is dependent on increased action, instead of a debilitated one. In this disease there is generally great uncertainty with respect to the operation of diuretics, and this often arises from the kidneys being in a state of irritation, and when this is the case on the administration of these medicines, blood is often discharged. You will find venesection is sometimes the best diuretic, purging too is useful; or indeed anything tending to lower the system; or if it be a case attended with great weakness, two or three ounces of blood abstracted from the neighbourhood of the kidneys would be attended with benefit. We all know that stimulants and tonics do great injury in cases of very irritable stomachs, and so it is with regard to the kidneys if irritable, and diuretics are given; we may also instance too in fever stimulating diaphoretics do not increase the action of the skin.

In this case the chief circumstance to be noted is the simplicity of the treatment; in medicine as in surgery, the simpler the means we employ to relieve the patient, the better. It is said that in cases requiring the lancet, the urine will contain ablumen; but this is not the fact, there will often be a large quantity of ablumen present, and yet bleeding would be injurious. We have a case of general anasarca now in the hospital, where there is a great quantity of ablumen in the urine, and yet venesection would be improper.

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Monomania.—Sedative Treatment, with Remarks by Dr. Elliotson.

Richard Carter, aged forty-six, was admitted under the care of Dr. Elliotson, a short time since. He had been deranged for some time; he has had syphilitic pains in the bones, which might have been the predisposing cause; he was despondent, and exceedingly apprehensive; he thought he was injured and ruined by others, that his constitution was destroyed by medical men, and he had great fears with respect to a future state; it was evidently a case of partial insanity.

Usually in cases of this description where there is no heat or tendency to inflammation in the part affected, the treatment is moral; to cheer the spirits of the patient has been considered the proper plan of proceeding. In this case there is no doubt that a particular portion of the brain was affected, though there was no pain; no flush of the face, but on the contrary a pallor, his pulse was low, no indication existing for bleeding, purgatives, or any species of antiphlogistic treatment. It has been found in cases of this description, that narcotics which do not irritate, have been highly beneficial; Dr. Seymour read a paper before the Royal Medico-chirur-

gical Society a short time since, in which he stated a great number of cases, which he had treated successfully by sedatives, in an establishment with which he is connected in Bethnal Green. This man was ordered half a grain of the muriate of morphia twice a day, it did him considerable good, and in a few days the deranged notions entirely left him. All the cases Dr. Seymour treated, were of partial insanity or monomania.

Opium, it is said, frequently stimulates, and is therefore unsafe for general use; but chemists have now so modified its different preparations that we can place great dependence on them. Whatever part of the brain is affected, the treatment will be the same.

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WESTMINSTER HOSPITAL.

Eczema Impetiginoides.

SUSANNAH WEBB, aged 44, was received March 18th, into Percy Ward under the care of Mr. W. B. Lynn, having an extensive eruption of the right hand and arm extending above the elbow, and also affecting the left hand. She states that she had a similar affection six years ago, after her confinement, which was about seven weeks in being cured. Her last pregnancy was about four years since. The catamenia have been regular until about Christmas last, since which period their appearance has been irregular and their quantity diminished; they appeared twice in the same three weeks, and once within the last fortnight; indeed she appears to have attained to the climacteric period.

The eruption appeared on the ring finger of the right hand, about three weeks ago, in the form of vesicles, about the size of "small peas;" which contained a transparent fluid, and were attended with great heat, itching and redness of the integument. The vesicles at an early period broke and discharged an acrid and irritating fluid, leaving the surface of the corium denuded of cuticle; and suppuration was established from this surface. Poultices had been applied before her admission into the hospital, which might have some effect in modifying the character of the eruption. The whole of the right hand and arm as far as the elbow, to which the previous description alone applies, is highly tumefied and inflamed, being of a deep red colour, and very dry and rough from the partially present cuticle having a tendency to exfoliate in many parts of the surface, giving it the character of psoriasis. An ichorous pus is still secreted in many of the intermediate parts.

The eruption on the left hand, which did not appear until several days subsequent to that on the right, appears to have commenced in the form of psudaceous pustules, which have since increased in size and assumed irregular shapes. It would appear probable that the pustular form of the erup-

tion on the left hand has been occasioned by the stimulant application used since her admission into the hospital. It is, however, much less generally diffused than on the opposite limb, but in the form of patches more or less confluent; it extends up to the elbow. There is none of the tumefaction and redness, indicative of subcutaneous affection, as in the opposite limb.

The general health of the patient is very good, and there is no adequate cause to ascribe the disease to, except the derangement of the uterine functions. She has not been employed as a laundress, nor has she been exposed to the heat of the sun; neither have the digestive functions been in any respect impaired or disturbed.

The treatment has consisted in keeping the arm covered with flour, and in the occasional application of a lotion consisting of the following:—

Rx. Mellis anglic, ℥ iss;
Spirit vini rectif. ℥ ij;
Aque puræ, ℥ v. M. ft.

lotio.

She is also directed to have the warm bath every other night.

16th. She has had the warm bath once since last report, which she says has afforded her great relief. The heat and itching are both much diminished, as well as the secretion of glary pus. The application of the lotion she states to cause considerable pain at the moment. The pustular form of eruption on the left hand appears to be cut short by the treatment, and is now dying away. She has had a dose or two of the house physic. The flour is directed to be discontinued.

19th. The redness, tumefaction, pain, and other inflammatory symptoms are all rapidly subsiding in the right arm, the cuticle of which is undergoing a speedy desquamation, and only a trifling extent of secretion taking place in some situations. The eruption on the left hand has almost entirely disappeared, the pustules of which it is composed having dried and shrunk up. The lotion and bath are both continued, the first having the effect of increasing the pain, which, however, is materially alleviated by the latter. The general health continues very good, the bowels merely requiring to be regulated by the occasional exhibition of an aperient powder.

21st. A patch of eruption situate over the left elbow has passed into a rather active state of inflammation, there being redness and tumefaction, and also a secretion of an ichorous fluid. The right arm is rapidly approaching a complete state of cure.

25th. The catamenia have reappeared during the last few days in about as abundant quantity as usual. On this account the use of the bath is for the present suspended. The left elbow and the rest of the surface have continued to improve.

28th. The cuticle has now become almost

entirely removed by desquamation; and though a little roughness of the skin remains, yet the improvement is very marked. She has had two warm baths since last report.

April 8th. She is now so nearly well that she expects to leave the hospital in a few days.

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Impenetrable Stricture, with Urinary Fistula. Operation.

Samuel Huie, æt. thirty. Eight years ago, while engaged as a planter in Jamaica, he fell across a beam, and injured his perineum: the accident was followed by retention of urine and extravasation. A small catheter was introduced thirty-six hours after the fall, and was kept in the bladder two days; the integuments and urethra had then sloughed, and laid open the passage several inches. It remained so twelve months, when the edges of the wound were pared, and ligatures applied. He wore a catheter till this had healed, which was in about two months. When it was withdrawn, the urethra became strictured at the same point, and at length almost impervious; only admitting the stilette of an elastic catheter. From this time he frequently suffered from retention of urine, and relieved himself by the introduction of the wire. About twelve months since, a small abscess formed in the perineum, behind the stricture, which burst, and the urine has been passed in part by the opening up to the present time. He was taken into the hospital, October 8th. No instrument could be passed through the stricture, except the small stilette, which he introduced with considerable dexterity. The urethra, at the termination of the bulb, was very hard and irregular, and behind it was a small opening in the perineum, which would scarcely admit the smallest probe. Micturition was attended with great pain; the urine passing guttatim from the fistulous opening, and in a minute stream, about the size of a horsehair, from the penis.

After he had been in the house some weeks, Mr. Key, finding it impossible to cure the stricture by dilation, proposed an operation, similar to the one which had before been performed, viz. that of opening the urethra with a knife, and allowing it to heal over a catheter. This was done on the 10th of November. The quilled suture was used, but removed three days afterwards, in consequence of a small slough appearing between the edges of the wound. A week after the operation the catheter was withdrawn, cleaned, and returned without difficulty. On the 10th of December, the opening was very small: Mr. Key introduced a smaller catheter, and ordered the Ung. Hyd. Nit. Ox. to be introduced on lint, with a probe.

On January 1st, the wound in the perineum was closed, except a very minute opening. The catheter was withdrawn, and ordered to

be introduced, when the patient wished to pass urine. The wound healed on the 12th; he introduced the catheter himself with facility, and was recommended to do so for some time, when he found it requisite. He left the hospital on the 17th.—*The Medical Quarterly Rev.*—April.

Case of Puberty and Pregnancy in a Girl of Ten Years of Age.—The following remarkable instance of this is related by Dr. D. Rowlett, of Kentucky, in our cotemporary, the *Transylvania Journal of Medicine* for October, 1834.

"Sally Deweese, daughter of John Deweese, was born in Butler county, Kentucky, on the 7th of April, 1824. She was of the ordinary size, but her hips and breasts began to grow rapidly in a few weeks after she was born, and at twelve months of age she began to menstruate, and her hips and breasts had become so large as to be the objects of common remark; and as she took no pains to conceal her condition, her menstruating so young became a fact of public notoriety, which continued regular till some time in the year 1833, when she became pregnant, and on the 20th day of April, 1834, she was delivered of a healthy female child, weighing seven and three-fourth pounds. Thus, at the age of ten years and thirteen days, she became the mother of a child of ordinary size; which, however, refused to suck her, and has been so far raised by the bottle. It is as healthy as is usual for children to be when raised from the bottle, and at the time of taking these notes it weighed eight and three-fourth pounds, and its mother weighed one hundred pounds. She was four feet seven inches high, and had the countenance of a girl not exceeding her in years, but is as intelligent as girls generally are at her age.

"She was the fifteenth child her mother had given birth to, and was born when her mother was forty-five years of age. There had been no previous case of early puberty, or premature old age in either the family of the father or mother.

"Her father lived in Butler county until she was two years old, and then removed to the place on which he now lives, in Hickman county, one mile south of Mayfield's Creek, and ten miles east of the Mississippi river, in latitude 36 deg. 59 min. N.; but I presume that latitude nor atmosphere has had any influence in this truly, (to me), astonishing case. I think it is an over-match for the case of the Swiss girl spoken of by Haller."—*American Journal of the Medical Sciences.*

Ointment to Allay the Irritation of Hemorrhoidal Tumours.—The following ointment is recommended by Dr. Geddings in our esteemed cotemporary, the *North American Archives of Medical and Surgical Sciences*, No. 1, as affording great relief to the irritation of hemorrhoidal tumours:—*Rx.* Pulv. carb.

plumbi. $\frac{3}{4}$ ss.; sulph. morph. gr. xv.; ung. stramon. $\frac{5}{8}$ j.; ol. olivar. q. s. Ft. ung. part. applicand.

Powdered opium to the amount of a drachm may be substituted for the morphia, and if the dry white lead is not at hand, that which is ground in oil for the use of painters may be advantageously substituted. Sometimes a drachm of powdered galls may be added.—*American Journal of the Medical Sciences.*

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Extract from Resolutions of the Court of Assistants of the Society of Apothecaries.

RESOLVED, that the Society's garden at Chelsea be open every Monday and Friday from the middle of April to the middle of August, from nine o'clock in the morning until twelve at noon, and that admission be given to all such medical students as are pupils to the established professors and lecturers in the metropolis, whether upon medicine, chemistry, materia medica, or botany, and also to the apprentices of the several members of the society.

That during each season there be delivered, at the garden, lectures, and demonstrations upon one or more of the following subjects, so as to form a regular course of botanic study, namely:—

1. The different systems of botany, both natural and artificial.
2. The structure and growth of plants.
3. The different parts of plants, with their descriptions and uses in the process of vegetation.
4. The natural and chymical analysis of vegetable matter.
5. The medical uses of the most important articles in the materia medica, with observations on the best modes of preparing them.

That the conducting these demonstrations and lectures be committed to the society's professor of botany.

That in order to give encouragement to diligence and talent, there be an annual examination of such students as may think proper to become candidates for the prizes intended to be given on these occasions. The examinations to be upon some or all of the subjects stated in the foregoing series of lectures, as well as upon their skill in the nomenclature of plants. No person to be admitted a candidate who has not attended these lectures and demonstrations at least eighteen days in one summer, or thirty days in two succeeding summers, nor shall any prize be awarded unless this examination be performed to the complete satisfaction of the examiner or examiners for the time being.

To prevent partiality or undue preference, no public professor or lecturer, whose pupils are admitted to the garden, can be appointed an examiner.

The apprentices to members of the society,

having an annual opportunity of being candidates for prizes upon the ancient establishment, cannot be admitted candidates on these occasions, either during the period of their apprenticeship, or subsequently to the conclusion of it.

That two medals, the one being gold, of ten guineas value, and the other of silver or bronze, be annually awarded to the two candidates, who shall have passed the best and second best examination in manner hereinbefore mentioned, but no medal is to be given unless in the opinion of the examiner or examiners the candidates shall be deemed deserving of it.

The beadle, or some proper person, is to attend at the garden, on each day of admission, to receive the visitors, and to enter or cause their names and the names of their tutors to be entered regularly, in a book to be provided for that purpose, and also to note therein any misconduct or breach of established regulations which may come to his knowledge during such attendance, giving information thereof to the master and wardens.

That the following be the regulations for the admission of students:—

"It is intended that admission shall be given to all such medical students as are pupils to the established professors and lecturers in the metropolis, whether upon medicine, chemistry, materia medica, or botany; such students to apply at least three days prior at the beadle's office, in Apothecaries' Hall, for tickets of admission for that purpose, which the master and wardens will grant to such persons as they may think proper.

"In order that the master and wardens may be enabled to exercise suitable discretion in granting such tickets, each student must leave with the beadle a letter of recommendation from his tutor, stating that such student has been attentive to his studies, and is, in his opinion, desirous of improving himself in the science of medical botany.

"That a ticket be given to each student, and that such ticket be renewed annually."

By order,

ROBERT B. UPTON,
APOTHECARIES' HALL. CLERK.

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The Medical Reform Bill.

A PARAGRAPH has gone the round of the newspapers stating that the magna charta of the medical profession is to restrain general practitioners from supplying medicines, and in lieu of which, they are to receive from five to ten shillings a visit. There is no truth in this rumour, and we speak advisedly when we state, that no report of the evidence given before parliament is yet complete; and consequently that no draft of a bill could be prepared until the report was presented to the house. Our brethren need not be alarmed at the intended enactment, for they may rest assured, that there is not one member of the

legislature, be he whom he may, so competent to manage the medical reform bill as Mr. Warburton, or to frame one more for the protection of the profession and the public.

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Who is to operate for Cataract on His Royal Highness the Duke of Sussex?

Suum cuique.

THE *Portsmouth Cholera Gazette*, alias the new periodical, which assumes the title of this journal, has answered the above question thus—"Miscellany of facts. We understand that Mr. Alexander will not operate on His Royal Highness the Duke of Sussex; but that the eminent surgeon and oculist, Mr. Guthrie, has been engaged for that purpose." This is what Cullen called a false fact. We have it on the best authority that Mr. Alexander is to operate, and that Mr. Guthrie has not been consulted about the royal patient. It would be well if veracious periodicals misnaming themselves medical, should attend a little more to truth, and not one day kill a number of convicts at Portsmouth with cholera, when the disease was absent, and another deprive an eminent surgeon of the highest honour he possesses, by awarding that to another, who, though among the ablest, has yet to attain it.

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Liability of Hospitals and Dispensaries to Poor's Rates.

A DECISION was given some time since by the magistrates of Hatton Garden police office against St. John's hospital and a rival institution in the same parish—the British St. John's hospital, for poor's rate. The parties gave notice of appeal to the sessions, and having neglected to carry their intention into effect, the magistrates ordered them to pay within fourteen days.

The hydra of taxation will not even exempt public charities or medical societies from its iron grasp, while it is lenient towards the halls and palaces of the aristocracy and the great ones. The time however rapidly approaches when such monstrosities will be exterminated.

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ROYAL COLLEGE OF SURGEONS IN LONDON.

Jacksonian Prizes.

THE two prizes for the year 1834, have been adjudged to Mr. Dickenson Webster Crompton, of Temple Row, Birmingham, for a Dissertation on Injuries and Diseases of the Nose and of the Nasal Sinuses: and to Mr. Thomas Blizard Curling, of Saint Helen's-place, London, for a Dissertation on Tetanus.

EDMUND-BELFOUR, Secretary.

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VOL. VII.

LECTURES
ON
MEDICAL JURISPRUDENCE,
DELIVERED BY PROFESSOR A. T. THOMSON,
F. L. S.,
At the University of London; Session 1834-35.
LECTURE XXVI.

Sudden Death.

GENTLEMEN—That man is born to die, is a truth which every hour's experience impresses upon the minds of mortals. But, when death approaches the sick bed; when he lays his freezing hand upon the heart of the aged, or arrests the course of mortality, in any of the thousand ways in which he usually secures his victim, the attention and interest of those not closely connected by ties of blood or friendship with the sufferer, are scarcely roused; the event recurs and passes unheeded and unregarded. On the other hand, when the power of death is displayed, without any evidence of the manner of his approach; when a dead body is found in the street, or on the highway; when a person, who was in good health at night, is discovered as a corpse in the morning; or when the debt of mortality is paid in any sudden or unexpected manner, then immediately curiosity and interest are awakened, and every circumstance is investigated that can tend to throw the faintest gleam of light upon the event. In most civilized countries, however, this inquiry is not left to chance, but devolves upon an officer legally appointed, whose duty it is to examine every circumstance connected with all cases of sudden or suspicious death. In England this officer is denominated Coroner, *Coroner*, from his duty in pleas of the crown; the mode of electing a coroner, and his duties; the power and authority which he possesses of calling together a jury, and summoning before him professional men. When their evidence is required, or when the least uncertainty exists respecting the cause of death, a dissection is necessary. The evidence which the coroner receives is upon oath, and upon the decision in his court the

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cause of death is recorded, and, if murder be suspected, those upon whom the suspicion falls are immediately arrested, and at a proper time put to the bar on trial for felony. The evidence, therefore, which a medical man is called upon to deliver before a coroner's jury, is not to be lightly considered.

Let us suppose a case of sudden death to occur, and that any one of you be called upon to examine into the causes of it:—a question arises, in what manner are you to conduct yourselves on such an occasion? In the first place, if the corpse be found in the field, in the highway, or in the street, you must divest your minds of every idea of murder, or suicide, or any unfair means having been the cause of death, until it be made so obvious as to admit of no doubt. You must examine, before the body is touched, if it have not been already moved, the position in which it lies, whether that indicate a fall from sudden insensibility or vertigo, or whether it lead to suspicion that the person had been beaten or knocked down. If any instrument be in the hand, or lying near the body, its nature and the position in which it is found lying, in reference to the body, must be noted down, as the presence of an instrument of death near a dead body, affords no evidence that that weapon had been employed as the cause of death, either by the person himself found dead, or by the hand of another. The state of the ground must, also, be carefully examined, whether blood be spilt upon it, and if so, whether it lie in a pool near the body, or can be traced from a distance; whether the ground bear the mark of a struggle having taken place, or only display the impression of the fall of the person. In fact, every particular relating both to situation of the place where the body is discovered, as well as the condition in which it is found, are properly expected to be noted down by the medical witness, both, because he is more able to make observations than the common crowd which usually collects on such occasions; and, also, because he is called upon to determine respecting the death of the person and must necessarily be a witness, in whatever court the cause of the death may become a subject of in-

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quiry; and, also, because he is supposed from his superior knowledge and education to proceed to the inquiry with a mind freer from prejudice than the less instructed. After having made these observations, the body must be removed into a house, stripped, and carefully examined, to ascertain the presence of wounds or bruises. If any be found, its length, breadth, and depth, must be noted, as well as its condition, with regard to hæmorrhage, inflammation or gangrene; whether it be recent, whether a bullet or any other foreign body be present in it, and with what description of instrument it has been inflicted; whether a cutting or stabbing weapon, or such as can only injure by a blow. The extent of the wound must be traced, in the manner I lately described to you, and what nerves, blood-vessels, or viscera, have been penetrated. The dissection, under every circumstance which may have contributed to death, must be conducted with the utmost care and precision in the manner I pointed out to you, when treating of wounds; and I would further refer you for information on this subject to the third volume of Fodéré's valuable work on Legal Medicine, and Deare's Remarks on Medical Jurisprudence.

If the sudden death take place in a house, or a room, in the presence of others, the extent of inquiry becomes more limited; but if no person have witnessed the death, the same inquiries are requisite as if the body were found in the fields. It is felonious to bury a body which has died suddenly, before an inquest be taken. (Russell, p. 416.)

Before proceeding to notice in detail the causes of sudden death, whether arising from internal causes, or external causes, whether accidental or intentional, in which I comprehend both murder and suicide, it may be proper to remind you that persons may appear dead who are actually not so, and consequently, that in every case of supposed sudden death, the first object is to ascertain that the person is really dead.

There are various states into which the body may fall, which closely simulate death:—syncope, and that singular disease to which I have already had occasion to allude under the name of catalepsy, eclampsia, concussion, strangulation, suffocation, drowning, cold, intoxication, and mephitism: all of which may terminate in actual death. I shall notice each of these in detail; but let us first inquire what are the signs of death.

There can be no doubt that in warm climates, in Ireland and some other countries in which early interment is customary, and in periods of epidemic and infectious diseases, persons have been prematurely committed to the grave, in whom although there was apparent death, yet life still remained. In this country, therefore, and in many others, the rites of sepulture are deferred until putrefaction, the unequivocal test of the total cessation of every function of life,

begins to display itself. Numerous well authenticated cases of apparent death might be mentioned; but not to occupy your time unnecessarily, I will mention a few only. Diemerbroeck, in his work, *Tractatus de Peste* (lib. iv. sect. 85), states that a peasant who had apparently died of the plague, and had discovered no signs of respiration after three days, on being carried to the grave recovered and lived many years afterwards. Howard the philanthropist, in his work on Prisons, mentions that he has known instances where persons supposed to be dead of the gaol fever, and brought out for burial, on being washed with cold water, have shewn signs of life, and soon afterwards recovered. One of the most heart-rendering accounts of premature interment that I know, refers to one of the family of Clopton, of Clopton Hall, near Stratford on Avon. A contagious fever was carried into the family and attacked one of the daughters and a son. This young lady apparently died, and was deposited in the family vault, at Stratford, on a bier, as was the custom of the period in the time of Elizabeth, in great families who had vaults. About a week or ten days afterwards, her brother actually died; and, on opening the vault, to prepare for his interment, the unfortunate lady was found sitting on the steps of the vault, having risen from her bier and died, if not of the horror which her situation must have excited, of starvation. Perhaps some of you know the anecdote in the History of Vesalius, the celebrated anatomist, regarding the dissection of a Spanish gentleman, in whom on opening the thorax, the heart was found still pulsating. The unfortunate philosopher was brought before the inquisition, and but for the intercession of Phillip the Second, to whom he was physician, would have been condemned to death. He expiated his unintentional offence by a journey to the Holy Land; and in returning, was shipwrecked on the island of Zante, where he died of hunger. M. Bruskier, a French physician in the seventeenth century, relates a case, on the authority M. l'Abbé Menca of a young woman who was restored from apparent death by the first incision of the anatomist's scalpel, and lived many years afterwards. Enough has been detailed to shew the necessity of not pronouncing hastily on the presence of death, until the last unequivocal sign presents itself. At this juncture, the state of collapse which occurs in cholera, bears in many instances the closest similitude of death; and in a less enlightened age, might add many instances to those already too numerous tales of horror, of hasty and inconsiderate entombment of the living. Those who are desirous of perusing extraordinary relations of this kind, may be amply satisfied in the article *Premature Interment*, in the *Encyclopædia Britannica*; in the works of Diemerbroeck and Hildanus; and in the "*Dissertation sur l'Incertitude des*

Signes de la Mort et l'abus des Intermens, et Enbaumemens precipite, of John Bruhier, published in 1742. Many of the accounts of this description are, undoubtedly, fabulous; but it is impossible to deny that such instances have occurred.

The first of the signs of death is the suspension of respiration, and of pulsation in the heart and arteries. The suspension of respiration is the most certain of these, and it cannot be continued many minutes without actual death supervening: whereas the action of the heart and arteries may be suspended for a considerable time, if respiration be still carried on, however obscurely, and yet these organs be again awakened to activity. But when respiration ceases, nothing can again rouse the function of these organs, the irritability of the heart depending solely on the due oxidizement, or change of the vital fluid from venous to arterial blood; so true is the Scriptural phrase, that "life is in the breath." The first object, therefore, in supposed death, whether occurring suddenly or from lingering disease, is to ascertain whether respiration still continues. This can, in many instances, be perceived by baring the thorax and abdomen; for it is impossible for breathing to be carried on many seconds without the influence of the respiratory muscles, the effect of the action of which is to elevate the ribs and depress the diaphragm, so as to push forward the sternum and cause a momentary swelling of the abdomen. It is of great importance to the young practitioner to accustom his eye to judge accurately of these movements, as the ordinary methods of applying a mirror to the mouth, or a downy feather near it, are both liable to error. If the mirror be warmer than the expired breath, no sign can be obtained by it, because the breath is not condensed upon it; or the insensible perspiration from the hand of him who holds it, may sully its surface; whilst "the light and weightless down," if confided in, will delude more than the prince who is thus described as having been deceived by it, when carrying off the crown from the pillow of his royal father—

———"by his gates of breath

There lies a downy feather, which stirs not,
Did he suspire, that light and weightless
down

Perchance must move."

Another symptom, the opacity and want of lustre in the eye, is equally fallacious; even the thin alimy membrane which covers the cornea in the eye of the dead, which breaks in pieces when touched, and is easily removed from the cornea by wiping, sometimes is found many hours before death occurs; and I have seen it in cases which, after all hope had ceased, recovered. In several instances, also, this appearance does not present itself, even after death; as, for

instance, in cases of poisoning by hydrocyanic acid; in which the eye retains all its lustre for hours after death, and the iris even contracts when approached by a bright light. This sign, therefore, when taken alone, is of no value, although, in conjunction with others, it tends to confirm the suspicion that death has already gained his triumph. The state of collapse, which is one of the symptoms of the cholera asphyxia, now so disgracefully a bone of contention in the medical world, has demonstrated how little is the value of coldness of the body as a sign of death. In this singular disease, the coldness which accompanies the state of collapse is that of ice, and during it no pulsation can be perceived even at the heart, yet the person lives and breathes, and frequently recovers. Drowned persons, also, in whom animation is only suspended, and who may be recalled to life, are always cold; whereas in some diseases, apoplexy for example, a certain degree of warmth is perceived for many hours after death. I have noticed it in some bodies on the day after that on which the person died; and yet no doubt whatever existed that death had actually taken place. A beggar went to bed drunk, and died suddenly during the night. On the next evening he was carried to the anatomical hall in Padua, and on the *third* day after his death he was dissected. Morgagni, who operated, found the body still warm. Paleness and lividity of countenance always accompanies such a state of collapse as I have mentioned; the body even becomes blue; this sign, therefore, which is usually put down as one indicating death, is of less value than any of the others. Cases, on the other hand, have occurred in which the countenance has remained unchanged a considerable time after death; and, in some instances, as Dr. Paris has remarked, "its colour and complexion have not only been preserved, but even heightened," as if the spirit, scorning the blow which severed it from mortality, had left the smile it raised upon the moveless features—or, as Shakspeare would express it—

———"smiling, as some fly had tickled
slumber,

Not as death's dart, being laugh'd at."

Next to putrefaction, the rigidity of the limbs is one of the most certain signs of death. It is true, that stiffness of the limbs may proceed from several causes, but the rigidity thus produced is not difficult to distinguish from that of death. In some cases of syncope, and in catalepsy, there is considerable stiffness; but, in such cases, it is accompanied with warmth, and takes place, as Orfila has remarked, immediately after the commencement of the disease, whereas the stiffness of death does not commence until some time after death, when the animal heat is not longer perceptible to the senses.

The stiffness which occurs in some convulsive affections is, also, as readily distinguished from the rigidity of death, by the fact, that although there is great difficulty in changing the position of the rigid limbs, yet, when left, they immediately resume their former position; in the stiffness of death, the direction of the limb which has been changed does not return to its former position. Orfila has supposed that it is possible to mistake the stiffness of a person who has been frozen, but is not dead, with that which is the inevitable result of death; but, in the former case, the stiffness is uniform, the skin, mammae and belly, are as rigid as the muscles, a circumstance not present in the stiffness of death, in which the muscles alone display any degree of resistance. When the skin, also, of a frozen person is depressed by forcibly pressing the finger upon it, the hollow thus produced is a long time in disappearing. He adds, when the position of a frozen limb is changed, a little noise is heard, caused by the rupture of the particles of ice contained in the displaced part. It must, however, be remarked that this degree of freezing can only occur when the body has remained for some time after death exposed to extreme cold. I shall recur to this subject, in mentioning the signs which indicate that death has been the consequence of exposure to cold.

From all that has been said, it is evident that there are no certain signs that a person is truly dead, except the total cessation of respiration, and the commencing putridity of the body. The question then presents itself—By what means are we made aware of the existence of putrefaction? It is suspected in its earliest stage, when the body becomes soft, and begins to exhale an offensive odour, and the fleshy parts to assume a dark colour. When it is no longer doubtful, the odour is strongly ammoniacal, the parts seem as if dissolving, their colour is constantly altering, and they separate into a kind of gelatinous mass. In such states of the body there can be no doubt that death is actually present; but, if we wish to investigate its causes by dissection, no certain judgment can be formed on the state of the soft parts after the first stage of putrefaction, or rather a tendency to it has passed over. But dissection, even in the last stage, long after interment has taken place, if the object be to ascertain fractures or injuries to bones, and also in some cases of poisoning, where the substances are of a character not very susceptible of decomposition. Fodéré relates a case of a dead body having been found in a field, in the arrondissement of Trevoux, during the month of May, 1811. It was in a state of putridity, and the surgeon who was ordered to examine it, not liking the task, reported generally that he had discovered no marks of violence. But, on interring the body, it was remarked, on the dropping of a handkerchief which co-

vered the head, that the bones of the cranium separated, and the brain issued out. A special examination of the head was ordered, and it was found that this person had received three blows from a cutting instrument, which separated the parietal bones from the rest of the skull. The bones had been replaced, and secured with the handkerchief. The murderers were afterwards discovered and punished. No rules can be laid down as to the time after death which may be allowed to intervene, before putrefaction is likely to take place. If the person has died suddenly, it is likely to be retarded or accelerated only by the state of the weather; it is accelerated by heat and humidity, retarded by a cold and dry state of the atmosphere.

In the dissection of a body to ascertain the cause of sudden death, it is of importance to determine, as I shall have frequent occasion to notice, the distinction between violence done to the body during life and after death.

Hæmorrhage is usually supposed to indicate the existence of the circulation when the injury was inflicted, and, consequently, that the person was alive; but this is to be taken with some reservation. In those who die of malignant diseases, blood often flows from the mouth, nose, or ears; in which case, however, it is *thinner* and of a *black* colour than usual. Hæmorrhage, therefore, of itself is no proof that any wound had been inflicted during life, so as to destroy it; for when this really occurs, when death follows wounds capable of causing much hæmorrhage, the large vessels are generally found empty, and the blood is of a red or florid colour. Much care must also be taken not to confound ecchymosis and sugillations with contusions from violent blows. Ecchymosis is an effusion or spreading of blood into the cellular tissue, and may result from a violent blow rupturing one or more blood-vessels; but spots resembling ecchymosis appear soon after death, in debilitated habits especially, from the mere gravitation of the blood to the most depending part, or that on which the body rests. Zacchias says that these spots may be readily distinguished from ecchymosis arising from blows or bruises, from the blood in the part being fluid; whereas the discoloration or true ecchymosis from external violence, is characterized by a congestion of thick coagulated blood in the part.

Sugillations are, also, effusions of blood into the cellular tissue; but proceeding from internal causes such, for example as the commencement of the putrefactive process, such as sometimes occurs during life, for instance, in malignant and petechial fevers. But sugillation coming on after death is always confined to a dependent part, which is not necessarily the case when they are the result of blows or strangulation. The discoloured spots in dead bodies, if they arise

from blows, often bear the impression of the instrument with which the blow has been inflicted. In a trial which took place at the Lent Assizes, in 1765, at Kingston, in Surry, the prisoner, John Stringer, was condemned on the evidence of a young surgeon, that some marks on the corpse had somewhat of the appearance of mortification caused by bruises. Mr. Cassan, an eminent surgeon, who had previously examined the body, from mere curiosity, on hearing of Stringer's conviction, applied to the Archbishop of Canterbury, who obtained a respite from Baron Smyth, who tried the cause, and afterwards a pardon from the King, on the conviction that the marks on the body were not the consequence of blows or any injury.

Sudden death may be caused by ruptures of vessels in the brain, or the viscera of the thorax or abdomen; as in apoplexy and other diseases. It is of importance to distinguish these from effusions, the consequence of blows and wounds.

Having settled these general preliminaries, let us now examine the various causes of sudden death, and the manner of determining, from the inspection of the body, to which of these the death of a person found dead is to be attributed.

Syncope is that state in which the action of the heart and arteries cease, whilst there is yet some action of the respiratory organs. In ordinary fainting, some feeble action of the heart is still going on, although not sufficient to render any pulsation evident in the arteries, at much distance from the heart. If respiration have ceased, and the heart no longer pulsates, there is little probability that life can be restored; but the action of the heart may be arrested from many causes and be again roused to renewed action, if too long a period do not supervene before means are resorted to for effecting this. I once witnessed a very alarming case of syncope, which would in all probability have proved fatal if immediate aid had not been procured, or if any previous state of disease of the heart had been present. It arose from tight lacing. (The lecturer related the case).

In this instance, if this young lady had not left her dressing-room, and no assistance had been near, and she had died, nothing would have been more difficult than to have given any correct notion of the cause of death. In instances where, as I have said, the heart, or its vessels, has been previously labouring under some organic affection, the syncope induced by violent passions of the mind, or by sudden shocks, may terminate fatally from rupture of the heart. In the case of the celebrated John Hunter, who died from a fit of passion, the valves of the heart had long been in a state of disease. A case related by Dr. Valentine Mott, in the Transactions of the Physico-Medical Society of New York, is illustrative also of this fact. A ro-

bust, plethoric female of 22, addicted to intemperate habits, was deserted by the man to whom she was engaged to be married; in consequence of which, her mind became deeply affected. She supped on the preceding night, retired to rest as usual, and was found dead, next morning in bed. She lay in a bent incumbent position, as if in a profound sleep, with neither countenance nor limbs in the least distorted. On dissection a breach was found at the aortic ventricle, from which much effused blood which gorged the pericardium, had issued. The parietes of the ventricle around the ruptured part were much thicker than in the natural state, and on close examination a very sensible fluctuation was perceived, to the extent of an inch on one side of it, from which flocculi of a cheese-like substance were discharged on pressure; the pericardium, also, presented traces of inflammation. This disease would not, most probably, have terminated so suddenly, but for the affection of the mind.

A very interesting paper on a peculiar variety of asphyxia, which M. Chevalier, the author, termed *idiopathica*, contained in the first volume of the *Medico-Chirurg. Transactions* has much connection with this subject. It has even been contended by many able pathologists that it may happen in a sound state of the organ. A most excellent illustration of this is given by Dr. Fischer.

See translation from *Journal Pratischen Heilkunde*, Dec. 1817, in the *Medical Repository*, vol. xi, p. 422.

In dissection, therefore, of cases of sudden death, from rupture of the heart, it is of the first importance to ascertain the previous state of the organ; and this is of the utmost moment in many questions connected with life insurance; for in the event of previous disease being detected in the aorta, an objection may be raised by the office on the score of a false certificate of warranty of health; for it cannot be denied that such a state of the heart or large vessels tends greatly to shorten life; and it is only upon the truth of the warranty that the validity of the contract depends. Again, it is of equal importance in cases of supposed homicide. Thus two men quarrel, and during the scuffle the one hits the other a blow on the chest, after which, he immediately falls down and dies. On dissection the heart is found ruptured. It becomes then an important question—in what state was the organ previously to the quarrel taking place; because, if it were in such a state that any strong mental emotion would endanger life, the condemnation of the accused person would be an act of flagrant injustice; but, in what manner can this be determined unless by careful dissection? What are we to look for? The reply is, disease either in the substance of the heart, or in the coats of the large arterial trunks, or in the valves.

A person, in a fit of passion, is pushed down, and dies suddenly; on opening the body, no blood is found effused in the pericardium, but there is an unusual enlargement and thickening in the muscular substance of the heart; and much blood is found effused in the brain. This might, erroneously, be ascribed to the fall; whereas it is more likely to have arisen from the impetus impressed on the blood by such a state of the heart, during the excitement of anger, being greater than the resistance of the vessels of the brain can sustain. In such a case, the arterial system may be said to be overloaded on every occasional excitement affecting the heart; the venous system cannot return the blood in an equal ratio, thence the arteries become gradually weakened, and at length, on a sudden excitement some one or other of them gives way. In such a case, the person who caused the fall, which preceded death, must be held guiltless. Instances of sudden death have occurred from no other obvious cause than the heart being overloaded with fat. Bonnet ascribes the sudden death of a very fat man to this cause; it causes suffocation. Thence this state of the heart must not be overlooked.

The sero-fibrous parts of the heart may be ossified by earthy matter deposited in the fibrous tissue, a fact which can be known only by removing the internal membrane of the organ; or the earthy matter may be

deposited in a kind of irregular crystallizations, forming unequal surfaces, covered also by the internal membrane of the heart. Indurations and ossifications of the whitish bands surrounding the ventriculo-auricular apertures, are also to be sought for, as well as cartilaginous and ossified states of both the mitral and semilunar valves, preventing the due transmission of blood from the cavities, and thence favouring rupture on its sudden accumulation in them, as is often the case in the early stage of these changes in the valves, when paroxysms of passion are instantly fatal.

Sudden death may also take place in aneurisms of the aorta, either from internal hæmorrhage, from bursting of the aneurismal sac; or from apoplexy, owing to compression of the aneurismal tumour, diminishing the area of the vena cava superior, when the aorta, in the superior part of the chest, is the seat of the disease.

Scarcely any age, except infancy, and no sex, is exempt from these affections of the heart; and the evil progresses, too often, in so imperceptible a manner, that it is not known until the fatal event display itself. When this involves a medico-legal inquiry, nothing is more justly disgraceful to a medical man than ignorance as to the nature of the appearances which dissection is calculated to display, and a consequent erroneous decision respecting the real cause of death.

LECTURES

ON THE

INSTITUTIONS OF MEDICINE,

DELIVERED BY JOHN FLETCHER, M.D., F.R.C.S.E., AT THE ARGYLE SQUARE SCHOOL OF MEDICINE, EDINBURGH; SESSION 1834-35.

LECTURE XVIII.

Evidences that the Ganglionic System of Nerves is the Seat of Irritability—(continued).

IN the last lecture it has been stated that it was very usual to describe the nervous cords that pass between the cerebro-spinal system of nerves and the ganglions of the great sympathetic as the roots or origins of the latter, and those only which pass between the ganglions and other organs as their branches. Reasons were advanced to shew that, even admitting this description of the origin of the ganglions to be true, no objection to the doctrine which ascribes the sources of irritability to them, could be maintained. But what right have we, except the gratuitous assumption that the cerebro-spinal system is the only source of nervous influence, to presume that the nervous cords which extend between this system and the ganglions are always branches from the former to the latter; nay, have we not a greater right—considering the priority of development of the latter system—to presume directly the reverse, and to consider them rather as branches from the ganglionic system to the cerebro-spinal? Thus are we equally, if not more justified *à priori* in regarding the twigs which extend between the motor oculi and the ophthalmic branch of the trigeminus, on the one hand—the reputed origins of the ophthalmic ganglions—and this ganglion, on the other, as proceeding from the latter to the two former, as in the opposite direction

those extending between the upper maxillary branch of the trigeminus and the abductor nerve, on the one hand—the alleged origin, in like manner, of the great sympathetic nerve—and the cavernous ganglion, on the other, as branches from this ganglion to the cerebro-spinal nerves in question as the reverse; and those lastly which extend between the several cervical, dorsal, lumbar, and sacral nerves—the so-called origins of the spinal ganglions—and the corresponding ganglions, as offsets backwards from the ganglions as forwards from the spinal nerves? Nor are there wanting many and strong arguments *à posteriori* in favour of the former opinion. The twig, for example, extending between the abductor nerve and the cavernous ganglion—to say nothing of the retrograde angle, at which, if we presume that it proceeds from the former to the latter, it is sent off (*a*)—partakes much more of the physical characters of a ganglionic than of a motiferous nerve, being much softer and less uniformly white and opaque than the abductor (*b*), and quite destitute of the fibrous structure, and proper tubular neurilema which characterize all the motiferous nerves (*c*): further, the abductor nerve is not smaller and weaker beyond the point where this union takes place, but larger and stronger (*d*), appearing clearly to indicate that it has gained a filament instead of losing one. Comparative anatomy moreover is decidedly hostile to the common opinion respecting the origin of the great sympathetic nerve from the abductor; since, in the majority of the lower animals, the filaments extending from the upper cervical ganglion into the carotid canal have no connexion with this nerve whatever (*e*). And similar remarks may be made with respect to the twigs which extend between the several spinal nerves and the corresponding ganglions of the great sympathetic—that they approach much more nearly in their physical characters to ganglionic than to cerebro-spinal nerves, and that there is frequently no manner of correspondence between the size of the respective ganglions and the size or number of these twigs from which they are so confidently described as arising; nor can it be said that this may depend upon the reinforcements which the ganglions receive from above and from below, from the trunk of the great sympathetic, itself derived from the cerebro-spinal system, when it is considered, first, that this origin of the great sympathetic is one of the chief points at issue, and secondly, that the want of proportion in the size of the ganglions is as remarkable when compared with their perpendicular, as with their lateral filaments—nay, that the great sympathetic nerve is not unfrequently entirely discontinuous without making any considerable difference in this respect (*f*). Now, if it be conceded that these and other filaments extending between the cerebro-spinal and ganglionic systems and nerves are branches from the latter to the former, or even that, wherever such a union takes place, there is a mutual interchange of filaments—which is perhaps the most rational opinion (*g*)—it will follow that to whatever organ of the body any cerebro-spinal nerve proceeds, there a ganglionic filament may be presumed to accompany it; since there is no such nerve, to whatever department of the cerebro-spinal system it may belong—with the exception of the three nerves of specific sensibility, the olfactory, optic and auditory, which proceed each to organs already abundantly supplied with nerves from other sources—with which the ganglionic system is more or less directly connected (*h*). Thus, of the respiratory nerves, the pathetic is connected with the ophthalmic ganglion; the facial with the sphenopalatine and sub-maxillary; the glosso-pharyngeal with the upper cervical; the pneumogastric with all the ganglions of the spine, as well as with the cardiac and coeliac; and the accessory, phrenic, and external respiratory again with the cervical. Of the motiferous

(*a*) Winslow.

(*b*) Soemmering.

(*c*) Soemmering.

(*d*) Petit, Soemmering, &c.

(*e*) Swan, on the Nerves, 1835. "No doubt," says Mr. Swan, "can be maintained that the branches proceed from the sympathetic to the sixth."

(*f*) Haller, Bichât, &c.

(*g*) In these instances "we have reason to believe," says Dr. Wilson Philip, "a double communication takes place, the spinal nerves conveying to the sympathetic the influence of the spinal marrow, and the sympathetic with them, to the parts to which they are distributed, filaments conveying the influence of the ganglionic system."

(On the Vital Functions, 1826). How inconsistent is this—in all probability the true statement of the case—with the principle, only two pages before inculcated, that "we cannot hesitate to regard the sympathetic nerve as arising from the spinal marrow!" If all the properties or powers which this nerve possesses be derived from the source in question, what "influence" can it possibly communicate to the spinal cord, which that organ had not before?

(*h*) The nerves of the human body may be conveniently classified under the two great heads of ganglionic and cerebro-spinal, the latter being subsequently distributed into the four sub-divisions of respiratory, motiferous, sensiferous, and regular, the last

nerves, the motor oculi is connected with the ophthalmic ganglion; the motiferous filament of the lower maxillary branch of the trigeminus with the sub-maxillary; the abductor with the cavernous, and the hypo-glossal with the upper cervical. Of the nerves of general sensibility, the ophthalmic branch of the trigeminus is connected with the ophthalmic ganglion; the upper maxillary branch of the trigeminus with the spheno-palatine and cavernous ganglions; and the sensiferous filament of the lower maxillary branch of the trigeminus again with the sub-maxillary—to say nothing of the connection which each of these branches may be presumed to have with the upper cervical ganglion, filaments of which are copiously distributed upon the gasserian ganglion through which they pass. Lastly, of the regular nerves, the sub-occipital is connected with the upper cervical ganglion; and all the cervical, dorsal, lumbar, and sacral nerves, not only directly with all the corresponding ganglions throughout the whole course of the spine, but also indirectly with the cardiac and coeliac ganglions. We seem to be fully warranted therefore in concluding, not only that wherever is a blood-vessel, there are ganglionic nerves as a part of that blood-vessel, but also that wherever is a nerve, to whatever department of the cerebro-spinal system it may belong, there some filaments from the ganglionic accompany it; and consequently that, so far from this system being confined to the several viscera, it is so universally distributed over the body, as to be abundantly competent, as far as this condition is concerned, to impart irritability to every muscle, whether ministering to the organic or animal functions.

11.—With respect to the continuance in action of the ganglionic system of nerves under circumstances in which that of the cerebro-spinal system is suspended or lost, the fact that it does so has been acknowledged even by those who are the strongest advocates for its dependence upon the cerebro-spinal system; and it was to reconcile this fact with their general hypothesis, that they invented the doctrine that the ganglions served as receptacles of animal spirits, which were derived primarily from the brain, but which might be so doled out by the ganglions, as to carry on the organic functions for some time without the agency of the former. But why, it may be asked, should the animal spirits, as doled out by the ganglions to the several viscera, differ so materially in their character from the same spirits as proceeding directly from the brain; and why should they, as conveyed to a limb

including those which communicate both the faculty of sensibility and the stimulus of volition. Adopting this general arrange-

ment, the following are the individual nerves "after their kind":—

GANGLIONIC.

CEREBRO-SPINAL.

Those immediately connected respectively with the *Ophthalmic*, the *Cavernous*, the *Otic*, the *Spheno-palatine*, the *Sub-maxillary*, the three *Cervical*, the *Cardiac*, the twelve *Dorsal*, the *Coeliac*, the five *Lumbar*, the five *Sacral*, and the *Coccygeal* ganglions.

<i>Respiratory.</i>	<i>Motiferous.</i>	<i>Sensiferous.</i>	<i>Regular.</i>
The Pathetic, The Facial, The Glosso-pharyngeal, The Pneumogastric, The Accessory, The Phrenic, The External Respiratory.	The Motor Oculi, A part of the lower maxillary branch of the Trigeminus, The Abductor, The Hypo-glossal.	The Olfactory, The Optic, The Ophthalmic branch of the Trigeminus, The upper maxillary branch of the Trigeminus, A part of the lower maxillary branch of the Trigeminus, The Auditory.	The Sub-occipital, The seven Cervical, The twelve Dorsal, The five Lumbar, The five Sacral.

Of these ganglions the cervical, dorsal, lumbar, and sacral were known to Galen. The coeliac was discovered by Willis, in 1664, the spheno-palatine and sub-maxillary by Meckel, in 1719, the ophthalmic by Zinn, in 1755, and the cardiac by Wurberg, in 1780; and comparatively recently the cavernous by Bock or Lermontier, and the otic by Arnold. The naso-palatine ganglion, the reputed discovery of Cloquet, has been omitted, as its existence is somewhat questionable; and the gasserian ganglion belongs to the cerebro-spinal, and not to

the proper ganglionic system. With respect to the cerebro-spinal nerves and their arrangement, it is proper to observe that there is hardly one of those above enumerated, the origin and functions of which have not been more or less questioned; and perhaps few or none of them, owing to the frequent union of most, if not all of them, with nerves of other systems, are exclusively what they are represented to be in the foregoing schedule. The present however is not the place for discussing their pretensions to the positions which they severally occupy.

by the ganglionic nerves, minister only to nutrition, secretion, and absorption, whereas, as conveyed to the same limb by the cerebro-spinal nerves, they minister to sensation and voluntary motion? It is an obvious inference from the fact that all those functions, whether of the viscera, or of the rest of the body, which require only irritability for their exercise continue unimpaired during sleep, in comatose diseases, and even for some time after apparent death, and from the acknowledgment that the ganglionic system continues in action under these circumstances, that this system is, not a mere reservoir of properties and powers which it never imparts, but a primary source of a property which, during the suspended action of the brain, is alone in requisition; and it is a strong corroboration, as already remarked, of the principle which would trace ganglionic nerves to every point of the body, that, so long as the functions of organs which minister exclusively to the organic functions, and which are supplied almost exclusively from this system, continue to be performed, many of the functions even of organs which minister more particularly to the animal functions, and which are supplied more remarkably from the cerebro-spinal system, remain unimpaired.

III.—It is a distinguishing feature in the character of the ganglionic system of nerves, that its filaments are every where small, and in many parts so minute as to be altogether invisible; and hence not only was the system in general comparatively very late in being discovered, and much later in being generally admitted by physiologists, but the existence of some parts of it has been, in recent times, denied, as already stated, even in organs in which the filaments are much less obscure than in many others (*a*). It is easy to conceive then that certain stimuli, by which muscles have been excited to contraction, may have been really applied to such filaments, when, to all appearance, they were applied directly to the muscular fibres; and thus that the latter may have appeared to possess inherently a quality which in fact they derived from the former.

IV.—If filaments from the ganglionic system of nerves everywhere accompany the blood-vessels, as well as, in all probability, are associated with all the cerebro-spinal nerves, it is evident that cutting the latter in their course to any organ, or even removing the brain, needs not materially interfere with the irritability of this organ, since a sufficient supply may still be furnished from the former source. But it is probable that no impediment whatever is offered to the function of a ganglionic nerve by such a division as entirely paralyses the cerebro-spinal. Such is the case with the latter only because the white matter of the nerve being dependent for its energy upon the grey matter of the central parts of this system, becomes of course inert when separated from it; but no such line of demarcation exists in the ganglionic system, every point of every nerve of which contains white and grey matter intimately interwoven together, and may be considered therefore as a centre of nervous energy to itself (*b*), and it is in this way only that it can be explained that the total removal of a muscle from the rest of the body, which implies a division, as well of its blood-vessels as of its nerves, is not, for some time, effectual in destroying its irritability. It has indeed long been known that dividing the large blood-vessels going to a muscular part has, after an interval, a much greater effect in impairing its contractility, than dividing its principal nerves (*c*), a fact which has been supposed to show—as will be in future insisted upon at greater length—that, while the capability of obeying a stimulus is inherent in the muscular fibre, it is by a certain influx of blood into it that its contraction is immediately effected; but it is not perhaps either from preventing this supposed influx, or from intercepting the influence of the ganglionic nerves which accompany these blood-vessels, that this effect results, but from, sooner or later, impeding the functions of the parenchyma of the part, the office of which is to renew ganglionic nervous matter, as well as every other tissue, in proportion as it is consumed. At all events, no conclusion prejudicial to the doctrine that the ganglionic nervous system is the immediate seat of irritability, can be fairly drawn from the results of any experiments of this nature.

V.—Again, that this system of nerves would be competent to renew the property of irritability in a part, the principal nerves of which had been divided, and so much of its immediate stock of irritability afterwards suddenly exhausted as to disqualify the larger muscles for any further contraction, might almost be inferred from the contents of the preceding paragraph. If irritability be the attribute of the tissue in question, it can be destroyed only in proportion to the destruction of this tissue; and were this destruction entire, it is obvious that any renewal of it must be impossible, since the failure would extend, not only to the larger muscular fibres, but to the parenchyma also, on the actions of which is one only reliance for the renewal of the ganglionic nervous matter, and with it— independent, as it is, of any common centre—of its characteristic property. But we must remember that in all cases of a general failure of irritability from natural causes, that of the capillary vessels long survives that of the larger muscles; and if the same thing hap-

(*a*) Soemmering and Behrend.

(*b*) Bichat.

(*c*) Stenon, Cowper, Boerhaave, &c.

pen when it is withdrawn artificially, it is easy to understand how a degree of exhaustion of it which shall entirely incapacitate, for a time, the larger muscles for any further contraction, should be quite compatible with a subsequent restoration of these organs to their natural susceptibility.

VI.—With respect to the earlier appearance, as we rise in the scale of animals, of the ganglionic than of the cerebro-spinal system of nerves, this argument, in favour of regarding the former as the immediate seat of irritability, is probably well founded, if it signify merely that we are to look upon the minute nervous nodules which first display themselves in animals forming, as it were, a connecting link between those which present no traces whatever of nervous matter, and those which have a regular nervous apparatus, as appertaining rather to the ganglionic than to the cerebro-spinal system of the superior tribes; but not if it compel us to regard—as some physiologists have done—the more or less concentrated nervous systems of all the invertebrate animals as corresponding merely to the ganglionic system of the vertebrate (a). Wherever a distinct nervous apparatus exists at all, whether in an invertebrate or vertebrate animal, that apparatus seems to correspond to both a ganglionic and cerebro-spinal, and not exclusively to either; and the only difference between such an apparatus as found in the invertebrate, and as found in the vertebrate animals, appears to be that the main portions of the two systems of which it consists are not, in the former, separated from each other by a distinct spinal column and skull, but directly amalgamated together, whereas, in the latter, they are so separated, and are connected with each other by reciprocal filaments interposed at certain intervals. The only means—short of any positive evidence of its correspondence with one or other of these systems—of determining the character of the apparently simple nervous apparatus of the invertebrate animals appears to be by observing, 1st, the general aspect and relative size of this apparatus; 2ndly, the situation of its principal departments; 3dly, the func-

(a) So long as the cerebro-spinal system of nerves was alone generally recognised in the higher tribes of animals, it would of course follow that such nerves as could be detected in the lower tribes, were considered to appertain to this, and such was at first the almost universal impression with respect to the nature of the nervous apparatus of the invertebrate animals in general; nor did the general recognition of the ganglionic system of nerves for some time make any difference in this respect, since they were for a long time regarded as merely an appendage to the cerebro-spinal. The subsequent establishment, however, of the independence of the former, coupled with the observation that the functions to which it seemed to be subservient in the higher tribes of animals were of more essential importance to their life and well-being than those to which the cerebro-spinal system was appropriated, soon led to the conclusion that in the invertebrate animals, which appeared to have only one of these systems, it was analogous, not to the cerebro-spinal, as had been supposed, but to the ganglionic system of the vertebrate. This was the opinion of Reil, and having been embraced by Bichat, it soon became, like most of the doctrines which he advocated, to a certain degree popular, and has been explicitly supported by Ackermann, Virey, Parker of Birmingham, and many others. Virey, indeed, has ventured to arrange animals, with reference to their nervous apparatus, into three classes, the first consisting of those which manifest nothing but nervous granules, more or less isolated, including only some of the lowest tribes of invertebrate animals; the second those which possess a distinct ganglionic, but no cerebro-spinal system, including all the

rest of the invertebrate tribes; and the last those which possess both, including all the vertebrate animals. It is probable, however, that—whatever we may think of the nervous granules here spoken of as corresponding exclusively to the ganglionic system—there is no instance of a *distinct* nervous apparatus at all which does not include both the ganglionic and cerebro-spinal systems, and consequently that Virey's supposed second class of animals has no existence. It is strange that the advocates of the doctrine which ascribes only a ganglionic system of nerves to any of the invertebrate animals should have neglected to notice that many of them manifest the most unequivocal marks of sensation and voluntary motion; so that it would have been equally reasonable to conclude *a priori* that their supposed simple system was cerebro-spinal as that it was ganglionic—nay, it would have been even more reasonable to come to this conclusion, since most of the other functions which they perform they exercise only in common with plants and quite the lowest tribes of animals, which have no obvious nervous system at all, whereas in sensation and voluntary motion they approach the highest tribes of the latter, which are never destitute of such a system. It was from taking this view of the matter that the old opinion has been, in recent times, maintained by Blumenbach, Cuvier, Gall, Rudolphi, Bell, and others, who look upon the apparently simple nervous apparatus of the invertebrate animals as corresponding, not so much to the ganglionic as to the cerebro-spinal system of the superior tribes—true to the maxim that “*in vitium ducit culpæ frega*,” as having failed to perceive that it corresponds equally to both.

tions of the organs on which it is distributed; and lastly the effects of direct experiment upon it. With respect, then, to its general aspect, the usually knotted and disjointed appearance of the nervous system of the invertebrate animals seems, at first sight, to favour the opinion that it corresponds exclusively to the ganglionic system of the vertebrate; but it must be remembered that, although, in the higher tribes of the latter, the ganglionic system has this appearance, while the cerebro-spinal is more or less cylindrical and continuous, the reverse is the case in the lower, such as fishes, in which, with very few exceptions, the sympathetic system is without knots and filaments, while the spinal cord and brain have often a somewhat knotted and unconnected appearance, and it is only as we rise through reptiles and the other intervening tribes that the two systems of nerves acquire gradually the appearance by which they are at length characterised. Now it is with fishes, as the next in rank to themselves, that the invertebrate animals should be compared in this respect; and the comparison necessarily leads to the conclusion that the bulk of their nervous apparatus is analogous to the cerebro-spinal system of the former, some minute filaments only corresponding to the sympathetic—the more especially, as the transition from the large nervous apparatus of many of the invertebrate tribes to the ample spinal cord and brain of fishes is progressive and easy, while to the slender sympathetic system it is retrograde and violent. We know, moreover, that in the metamorphoses of many insects, as the Moth (*a*), (*Sphinx*, 20), and the Hornet-Fly (*b*), (*Asilus*, 23), from the state of larva to that of pupa, and from the state of pupa again to that of imago, several of their large nervous knots coalesce into a kind of knotted cords, making a very near approach, both in appearance and in relative size, to the spinal cord and brain of the lower vertebrate tribes, but altogether dissimilar, in both these respects, to their sympathetic system. The situation, again, of the principal departments of the nervous apparatus of the invertebrate animals—as far as this is of any importance—is favourable to the opinion that it corresponds at least as much to a cerebro-spinal as to a ganglionic system. The first rudiments of a nervous system visible in these animals, and the part of it which is most constantly met with, is a knot on the dorsal aspect of the part corresponding to a neck, sending a kind of collar round the gullet; and it is from some part of this that a chain of knots in general proceeds along the body. Now, this rudimental part of the nervous system, is in some invertebrate animals, as the Cuttle (*Sepia*, 10), contained in a kind of rudimental skull, and may be therefore fairly presumed to correspond to a brain; while the chain of knots along the body, contained, as it is in some, as the Cray-Fish (*c*) (*Cancer*, 16), in a partial horny canal formed by the shell, and in others, as some species of Grass-hopper (*Gryllus*, 25), in a similar canal formed by the segments of their sheath, may be with equal reason presumed to be analogous to a spinal cord, the latter indeed has, distinct from the main chain of knots in question, two smaller cords which seem to correspond with a sympathetic system. It is true this main chain of knots, in many invertebrate animals, as the Leech (*d*) (*Hirudo*, 13), the Earth-Worm (*e*) (*Lumbricus*, 13), the Sea-Mouse (*f*) (*Aphrodita*, 14), the Cray-Fish (*g*) (*Cancer*, 16), and insects in general, runs along their abdominal rather than along their dorsal aspect, but in others on the contrary, as the membranous Ascidia (*h*) (*Ascidia*, 6), the Mussel (*i*) (*Mya*, 7), the Sea-Hare (*k*) (*Aplysia*, 8), and the Garden Snail (*l*) (*Helix*, 9), it holds its course along their back, so that no weight can be assigned to this circumstance in regarding it as corresponding rather to the ganglionic, than to the cerebro-spinal system. In some insects indeed, as the Grass-hopper (*Gryllus*, 25), just mentioned, while the portion of the nervous system which corresponds to a spinal cord, runs along their abdominal, that corresponding to a sympathetic system runs along their dorsal aspect; but we know that the situation of parts is in general a consideration of very little importance in tracing structural analogies. If we attend also, to the functions of the organs on which the chief nerves of the invertebrate tribes are distributed we shall not hesitate to believe that they are analogous, at least equally, to the cerebro-spinal system as to the ganglionic. The nervous collar just alluded to, as the first visible trace in animals of a distinct nervous system, ministers directly to the motion of the jaws, or corresponding organ, and to taste, and thus corresponds distinctly to the lower maxillary branch of the trigeminus nerve—in its motiferous and sensiferous filaments—of the higher classes of animals; round the pharynx and gullet of which in fact, a similar collar is formed by the nerve in question, although, from the comparative complexity of the parts, it is less immediately obvious. The first visible nerve then is a branch of the cerebro-spinal system. It is certain likewise that most invertebrate animals send nerves directly to other organs

- (a) Newport, Roget, vol. ii, p. 547.
 (b) Swammerdam, pl. xxxix and xl.
 (c) Home, Carus, pl. vi, fig. 1.
 (d) Home, vol. iv, p. 39.
 (e) Home, vol. iv, pl. 147.
 (f) Pallas, pl. vii.

- (g) Home, Carus, pl. vi, fig. 1.
 (h) Carus, pl. ii, fig. 3.
 (i) Spex, Carus, pl. ii, fig. 10.
 (k) Cuvier, Carus, pl. iii, fig. 7.
 (l) Swammerdam, pl. iv and vi.

of voluntary motion and sensation besides the jaws and tongue—the Star-Fish (*a*) (*Asterias*, 5), for example, to the tentacula, the Garden-Snail (*b*) (*Helix*, 9), to the muscles of the neck and of locomotion, as well as to the eyes and feelers, the Cuttle (*c*) (*Sepia*, 10), to the tentacula, eyes and ears, the Sea-Mouse (*d*) (*Aphrodita*, 14), to the tentacula, the Cray-Fish (*e*) (*Cancer*, 16), to the antennæ, legs and tail, the nostrils, eyes and ears, the Silk Worm (*f*) (*Phalæna*, 20), to the muscles of the head, the feet, wings, and eyes, the Bee (*g*) (*Apis*, 23), to the feet, wings and eyes, and so forth; and such nerves must accordingly be presumed to correspond, not to the ganglionic, but to the cerebro-spinal system of the superior tribes. On the other hand it must not be forgotten that it is not only to the organs of voluntary motion and of sensation, that nerves proceed from the apparently simple nervous apparatus of the invertebrate animals, but also to those of respiration, circulation, digestion and generation, as is sufficiently manifest among those just mentioned in the Garden-Snail (*Helix*, 9), the Cuttle (*Sepia*, 10), the Cray-Fish, (*Cancer* 16), the Silk-Worm (*Phalæna*, 20), the Bee (*Apis*, 23), and numerous others; and such nerves we are compelled to believe correspond, not to the cerebro-spinal system, but to the ganglionic. Lastly it has been found that the removal of the central parts of the nervous apparatus of the invertebrate animals is attended with fatal consequences (*h*); which in all probability would not have happened, had it corresponded exclusively to the ganglionic system, and not also to the cerebro-spinal. This assertion appears, at first sight, somewhat opposed to the presumption, hitherto constantly insisted on, that the former furnishes a property much more immediately essential to life than the latter; but it must be kept in mind that every point of the ganglionic system being a centre of nervous influence to itself, the system collectively is quite independent on any common centres, and accordingly, not only may all communication with such common centres be cut off—as has been already stated—but the latter may be altogether withdrawn—as will be stated more fully in future—without destroying, or even sensibly impairing the function of the nerves connected with them. Such is not the case, however, with the cerebro-spinal system; which, although it ministers to functions less immediately essential to life than those to which the ganglionic system is subservient, cannot be supposed to be thus violently destroyed, without, sooner or later involving the system in general in its destruction.

(*a*) Tiedemann, Carus, pl. i. fig. 2.

(*b*) Swammerdam, pl. iv, and vi.

(*c*) Swammerdam, pl. i, and lii.

(*d*) Pallas, pl. vii.

(*e*) Home, Carus, pl. vi, fig. 1.

(*f*) Malpighi.

(*g*) Swammerdam, pl. xli.

(*h*) Rolando.

A NEW PRACTICAL FORMULARY

OF HOSPITALS, OR A

Collection of Formulæ of the Civil and Military Hospitals of France, Germany, Italy, Great Britain and Ireland, &c., containing the Indication of the Doses in which simple Substances, magistral and officinal Preparations of the Codex are administered, the use of New Medicines, and general receipts on the art of prescribing. By M. EDWARDS, M. D., and P. VAVASSEUR, M. D., of the Hospitals of Paris—1834. Translated and augmented by M. RYAN, M. D. &c. &c.

(Continued from p. 371.)

Narcotic Decoction. M. de Santé.

Rx. Papaveris capsularum. No. ij;
Florum sic. belladonnæ, ʒj;
Aquæ, Oj.

Coque et cola.

Employed in local baths, fomentations, injections, &c.

An Emollient and Anodyne Injection.

Rx. Decocti papaveris, Oj;
Emulsionis arabicæ, ʒv;
Albuminis ovi, ʒj.

Fiat injectio.

Employed in acute urethritis.

Anodyne Enema. H. de la Mat.

Rx. Papaveris capsul. No. j;
Decocti lini, Oij.

Decoque et cola.

Anodyne Enema. H. St. Ant.

Rx. Papaveris capsular. ʒss;
Aquæ, Oj.

Coque tum cola.

The Enema of Poppies of the H. des Enf. contains only ʒij of poppies to the same quantity of water.

Antidiarrhæal Enema.

Rx. Syrupi papaveris, ʒij—iv;
Decocti amyli, ʒviij.

Fiat enema.

Employed in colliquitive diarrhæa, and in purging of infants.

[Sedative enemata are efficient in dysentery, hæmorrhoids, abdominal inflammation, &c. The starch and opium enema is an old and valuable remedy. The dose of the latter is ʒss—j. T.]

RED POPPIES.

Emollient and slightly narcotic. Employed in pulmonary catarrh, and other inflammatory affections &c.

INTERNALLY. Decoction, or infusion. Pinc., ij—iv to Oij of water.

Eau de Cuquelicots. P. ʒj—iv, as a vehicle for antispasmodic and sedative potions.

Sirop de Coquelicots. P. 3 iv—3 j, in a potion.

Infusion of Red Poppies. H. de la Ch.

Rx. *Florum rhœados*, 3 ij;

Aquæ ferventis, Oij.

Macera et cola.

The dose is a small cupful while hot.

Pectoral Infusion. H. de Lyon.

Rx. *Florum rhœados*, 3 ij;

Acidi sulphurici diluti, gut. xv;

Sacchari, 3 j.

Macera omnia in.

Decocti hordei, Oj.

Cola, sumat in die.

ACETATE OF MORPHIA.

A very energetic narcotic, possessing the same properties as opium. It is employed in the same cases as that medicine.

INTERNALLY. Gr. $\frac{1}{2}$ —ij in the twenty-four hours, in pills, or in a potion.

Solution of the Acetate of Morphia. F. de M. (*Acetate of morphia*, gr. xvj; distilled water, 3 j; acetic acid, gut. iv; alcohol, 3 j). Gut. vi—xxiv, in a potion. 3 ss of this solution contains about gr. 1 of the acetate of morphia.

Sirop of Morphia. F. de M. (*Acetate of morphia*, gr. iv; common syrup, ℥ij). Cochl. min. j, every two or three hours, or 3 j in a potion. 3 j contains $\frac{1}{4}$ of a grain of the acetate. This syrup replaces with advantage the syrup of poppies.

Sedative Potion. H. of Italy.

Rx. *Solutionis morphine acetatis*, gut. xx;

Extracti lactuce virosæ, gr. x;

Syrupi althææ, 3 j;

Infusi anthemidis, 3 v.

Misce.

Dosis cochl. mag.

Sedative Emulsion. H. of Italy.

Rx. *Syrupi morphine acetatis*, 3 j;

Mucilaginis acaciæ, 3 viij.

Dosis cochl. mag.

Sedative Pills.

Rx. *Morphine acetatis*, gr. j;

Confectionis aurantii, gr. xvj.

Divide in pilulas viij, sumat unam vel duas sextâ quaque horâ.

In neuralgia, cancerous affections, &c.

Boluses used in Catarrh. H. de Mont.

Rx. *Morphine acetatis*, gr. ij;

Extracti hyoscyami albi, gr. vj;

Balsami sulphuris,

Extract glycyrrhizæ, ā ā gr. xvij;

Croci,

Gummi tragacanthæ, ā ā 3 jss;

Butyri cacao, 3 j.

Fiant boli xxxv ex quibus capiat unum secundâ vel tertiâ quaque horâ.

In cases of catarrh accompanied with great irritation.

Each bolus contains gr. 1-18th of the acetate, and gr. 1-6th of hyoscyamus.

EXTERNALLY. Gr. $\frac{1}{4}$ to j. applied to a blistered surface, according to the endermic method, in the same cases as it is employed internally when it is feared it would cause too much irritation of the stomach.

[It may be mixed with lard or simple cerate, in liniments and ointments. T.]

SULPHATE OF MORPHIA.

Its action is the same as that of the acetate, [and it is administered in like doses, sulphuric being substituted for acetic acid. T.]

INTERNALLY. Gr. $\frac{1}{4}$ —j, in pills.

Syrup of the Sulphate of Morphia. F. de M. (*Sulphate of morphia*, gr. iv; common syrup, ℥ij). Cochl. min. j, every hour or every three hours, or 3 ss—j in a potion. 3 j contains gr. $\frac{1}{4}$ of the sulphate.

Sedative Pills. H. of Italy.

Rx. *Sulphatis morphine*, gr. j;

Olei olivæ, q. s.

Liqua sulphatem et adjice.

Ipecacuanhæ, gr. iij;

Nucis vomicæ, gr. ij;

Miccæ panis,

Mellis, ā ā q. s.

Divide in pilulas vi, ex quibus sumat unam tertiâ quaque horâ.

CITRATE OF MORPHIA.

It acts in the same manner as the other salts of morphia, and is used in the same cases.

[It irritates the stomach less than the other preparations, and is the most active according to some writers. It is not much used in this country. T.]

INTERNALLY.

Solution of the Citrate of Morphia. F. de M. (*Morphia pure*, gr. xvj; crystallized citric acid, gr. viij; distilled water, 3 j; tincture of cochineal, 3 ij). Gut. vj—xx in the 24 hours, in a potion.

HYDROCHLORATE OF MORPHIA.

This preparation of morphia enjoys the same properties as the preceding. It is preferred as an hypnotic.

INTERNALLY.

Solution of the Hydrochlorate of Morphia. H. of England.

Rx. *Hydrochloratis morphine*, gr. x;

Aquæ destillatæ, 3 xiv.

Liqua.

The dose is gut. xv—xxv, in a potion, or in a little water sweetened with sugar. (100 drops contain gr. 1 of the hydrochlorate or muriate of morphia).

[This preparation is recently preferred by British physicians. T.]

NARCEINE—MECONINE—CODEINE.

Three substances have been recently discovered in opium—*narceine*, *meconine*, and *codeine*.

Narceine was discovered in 1832, by M. Pelletier; and *meconine* the same year by M. Couerbe. Both are obtained by evaporating the ammoniacal solution in which morphine is precipitated to the consistence of syrup during some weeks, when a crystallous mass is deposited. This is submitted to pressure, heated with boiling alcohol, 40° Rem.; the alcohol is distilled, when a yel.

low crystallised residue is obtained, which is redissolved in alcohol and filtered through animal carbon. The mass which remains is composed of narceine and meconine; it is heated with boiling water to separate a small portion of narcotine which it sometimes contains; and then ether is added to dissolve the meconine without affecting the narceine. These substances have not as yet been used medicinally.

Codeine was discovered in 1832, by M. Roubiquet. He obtained it by decomposing the double muriate of morphine and codeine, which is the hydrochlorate of morphine of Gregory, of Edinburgh, by ammonia, which precipitates the greatest portion of the morphine. The solution is evaporated until signs of crystallization appear, the liquor is left at rest, and the double salt of morphine and codeine is crystallized. This is dissolved in water, and strained through animal charcoal; a solution of caustic potash is added in slight excess, which holds the morphine in solution and precipitates the codeine alone, and this is purified by alcohol or ether.

M. Barbier states that codeine has a remarkable effect, a special action on the ganglionic nerves, especially in the epigastric region. (*Gazette Medicale*, April, 1834).

M. Magendie has administered it to several of his patients at the Hotel Dieu, in the dose of half a grain, increased to a grain; it produced a tranquil sleep, which was not followed next day by somnolence or heaviness in the head, a frequent consequence of morphine; one grain is equal to half a grain of morphine. He gives one, two, or three grains in a mucilaginous emulsion, and also in pills—one grain in each. He has used the hydrochlorate of codeine in facial and sciatic neuralgia, which resisted all other means, with an effect as if caused by enchantment. He has also used the nitrate of codeine. The salts of this substance are more energetic than their base, and should be used in smaller doses. Many diseases which withstood the preparations of morphia have yielded to this.

The double muriate of morphine and codeine of Gregory may be used in the same doses and diseases as the preparations of codeine. *Formulary*, 1835.

Extract of opium, deprived of morphine, is much weaker than the water extract—gr. iv equal $\frac{1}{2}$ of morphia.

Extract, deprived of narcotine, same as watery extract.

Narcotine, 3j, administered in twenty-four hours, produced no effect. (Magendie). It is not used by British physicians. T.]

PRUSSIC OR HYDROCYANIC ACID.

The most violent poison at present known, diluted with water and in small doses, it acts principally on the nervous system, diminishes muscular sensibility and contractility, and occasions great prostra-

tion of strength. It is employed internally as a sedative in nervous and convulsive coughs, in the access of asthma, whooping cough; in cases of cancers, attended with severe pain, &c. Externally it is used as a topical anodyne, in certain chronic and painful cutaneous affections, or accompanied with itching, and in cases of cancerous ulcers.

[It is also used in pyrosis, obstinate vomiting, painter's colic, irritable uterus, pneumonia, diseases of the heart, phthisis, cerebral fever, &c.]

It is greatly to be regretted that there are the greatest variations in the strength of the medicinal prussic acid of this country. Mr. Everett stated in a lecture delivered before the Medical Botanical Society of London, in Jan. 1835, that he had examined various samples of Scheele's acid, which is usually prescribed in this country, and that the frightful difference of strength had induced him to make the results known, with a view of directing the attention of the medical profession to the evil. Thus the sample of Allen and Co. yielded 5.8 per cent. that of Apothecaries' Hall, London, procured at different times 2.1., and 2.6, and that from several other shops 1.4 per cent. This is a remarkable fact, as each sample was said to have been prepared according to Scheele's formula. Mr. Laming had previously represented the difference from 2.5. to 5 per cent. "Now it is true, says Mr. E., we have no fixed standard, and there ore it is impossible to say, whether Allen & Co's. is too strong, or the others too weak; but thus much is certain, that if a medical man were pushing the exhibition of hydrocyanic acid gradually to a maximum dose, the prescription being carried to a shop where the acid had only 1.4 per cent, and then by some accident or other cause, taken to where Allen's acid was used, a sudden, and I fear, a fatal increase would be the result, for more than a quadruple quantity would be taken. For the possibility of a fatal accident, I need only refer to the case of seven individuals near Paris, being killed by a slightly increased dose, recorded in all the medical periodicals a few years since (*London and Edinburgh Philosophical Magazine*, Feb. 1835). To remedy this evil, Dr. Clarke, Professor of Chemistry, in the University of Aberdeen, proposed in 1831, a process since adopted by Mr. Laming, of decomposing pure cyanuret of potassium with tartaric acid in a common phial, "and the result is," continues Mr. L. "a medicinal prussic acid of extreme purity, necessarily uniform in strength, and the only preparation which will retain its strength unimpaired for any length of time." Mr. Everett, however, contends before the Society that the acid thus prepared was not perfectly pure, and proposed another formula for its substitute. It is this, to dilute hydrochloric acid to the exact

sp. gr. 1.129, and to decompose cyanuret of silver with it. *Op. cit.* Mr. Laming comments on the preceding statements, and contends that his method is as good, and much cheaper (*Lancet*, March 28, 1835). The difference of strength of this acid accounts for the sudden death caused by it in the usual dose, and also the escape after a large quantity has been taken. T.]

Subst. Incomp. Mineral acids, the salts of iron, the sulphates, the chloride, and the nitrate of silver, the oxides of mercury, &c.

[It is doubtful whether the neutral salts decompose it, as nitrate of potass, tartarized antimony, &c., for when combined with these it has poisoned animals. T.]

INTERNALLY. Medicinal Prussic Acid. L. de M. (Prussic acid of Gay-Lussac, 1 part, distilled water $8\frac{1}{2}$ parts). Gr. vi—xv, in a potion. The phial in which this medicine is kept, should be covered with black paper, and should be well shaken before used.

[The phial should also be inverted and kept in a cellar. T.]

The same precaution should be observed with all the preparations of prussic acid.

[The acid rapidly evaporates on opening the phial, and the fluid which remains in an ounce bottle, after having been frequently opened, becomes useless. No more than 3j should be kept in the surgery for use. T.]

Alcoholized Prussic Acid. F. de M. (Prussic acid, 1 part; alcohol, 6 parts). In the same doses as the preceding. This preparation decomposes less easily than the former.

Sirop Cyanique F. de M. (Medicinal prussic acid, 3j; common sirop. ℞j); 3ss—j, in a pectoral potion. Each ounce contains gr. $4\frac{1}{2}$ of the medicinal prussic acid.

The *Hydrocyanic Acid Syrup* of the codex is a dangerous preparation, and ought never to be employed.

Pectoral Mixture. Magendie.

℞. Acidi hydrocyanici medicinalis, 3j;
Aque destillatæ, Oj;
Sacchari, 3jss.

Misce, cochleare modicum mane nocteque.

The dose may be gradually increased to 6 or 8 spoons ul daily; each spoonful, weighing 5 drachms, contains about gr. $2\frac{1}{2}$ of medicinal prussic acid.

Pectoral Potion. Magendie.

℞. Acidi hydrocyan. medicinal, m.
xv;
Infusi hederæ terrestris, 3ij;
Syrupi althææ, 3j.

Misce, sumatur cochleare modicum tertiâ quâque horâ.

Each spoonful contains about $3\frac{1}{2}$ gut. of the acid.

Bols Contro-stimulants. H. of Italy.

℞. Acidi hydrocyan. medicinal, m.
xxx;
Miccæ panis,
Mellis,
Pulveris glycyrrhiæ, â â q. s.

Fiant boli xv, ex quibus capiat, unam secundâ vel tertiâ quâque horâ.

[I frequently order this acid for infants, See *Ipecacuanha*. T.]

EXTERNALLY.

Lotion of Prussic Acid. Magendie.

℞. Acidi hyrocyanici med. 3j ad ij;
Aque lactucæ sativiæ, 3j—ij.

The dose of the acid may be carried to 3iv.

[Dr. A. T. Thomson was the first in this country who used it externally. T.]

The *Anodyne Lotions* of the H. de la Salp. do not differ materially from the above mixture. They are employed in lotions, in cases of tetters and cancerous ulcers, and in injections in cancerous affections of the uterus.

[HYDROCYANIC ETHER.]

This medicine was employed by Magendie in the same diseases as prussic acid; but it excited such insurmountable disgust, that he soon abandoned it. The dose should not exceed six drops. T.]

CYANURET OF POTASS.

It acts in the same manner as hydrocyanic acid, and has the advantage over that medicine of not evaporating or changing its properties. It is employed in the same cases and recently in neuralgic and nervous affections of the heart and lungs.

INTERNALLY. Gr. $\frac{1}{2}$ —j, in pills, or in a potion.

Solution de Cyanure de Potassium or *Hydrocyan de Potasse Médicinal.* F. de M. (Cyanuret of potass. 1 part; distilled water, 8 parts). Gut ij—vj two or three times a day, in a potion.

Sirop d'Hydrocyante de potasse. F. de M. Hydrocyanate of potass, 3j; common syrup, ℞l, ($\frac{1}{3}$ ss to j. in a potion; each ounce contains gr. $4\frac{1}{2}$ of the hydrocyanate).

[This solution should be prepared extemporaneously, as it speedily decomposes. T.]

Pectoral Mixture. Magendie.

℞. Hydrocyanureti potassæ, 3j;
Aque destillatæ, Oj;
Sacchari, 3jss.

Misce.

Dosis cochleare modicum mane nocteque.

Pectoral Potion. Magendie.

℞. Hydrocyanureti potassæ, gut.
xv;
Infusi hederæ terrestris, 3ij;
Syrupi althææ, 3i.

Misce.

Sumat æger cochleare minimum, tertiâ quâque horâ.

Potion of the Cyanuret of Potass. Magendie.

℞. Aque, lactucæ sativiæ, 3ij;
Cyanureti potassæ. gr. ss. ad ij;
Syrupi althææ, 3j.

Misce.

Dosis, cochleare modicum secundâ quâque horâ.

Pills of Cyanuret of Potass. H. de la Pitié.

Rx. Cyanureti potassæ;
Amyli, ā ā gr. iv;
Syrupi simplicis, q. s.

Divide in pilulas viij, ex quibus capiat unam mane nocteque.

Employed in certain cases of convulsions, dyspnœa, &c.

CYANURET OF ZINC.

This preparation acts in the same manner as the cyanuret of potass. It is administered in the same cases. Some practitioners use it also as an anthelmintic.

[It is preferred by the Germans to hydrocyanic acid. T.]

INTERNALLY. As a sedative, gr. $\frac{1}{4}$ —v progressively increased.

As an anthelmintic, gr. j mixed with a little jalop.

Powder of the Cyanuret of Zinc. H. of Germany.

Rx. Cyanureti zinci, 3 ss;
Magnesiæ calcinatæ, ʒj;
Cinnamomi pulveris, gr. xvij.

Divide in chartulas vi, quarum sumat seger unam, quartâ quâque horâ.

Employed with advantage in nervous affections of the stomach, &c.

[CYANURET OF IODINE.]

This substance is not as yet employed medicinally. T.]

CHERRY LAUREL.

Its action is the same as that of prussic acid but less energetic. It is employed in the same cases as that medicine.

INTERNALLY. Distilled water, P. Gut. vj—3 ss, in a potion.

Pectoral Potion. Hot. D.

Rx. Aquæ destil. lauro-cerasi 3 ss;
Jalapii pectoralis, ʒ iv.

Misce.

Dosis, cochleare modicum.

To calm a spasmodic troublesome cough and chronic catarrh.

Sedative Syrup. (Roux.)

Rx. Aquæ lauro-cerasi, 3 vj;
Mucilag. acaciæ, ʒ vj.

Sit mistura, cujus capiat coch. ampl., ter quaterve in die.

In nervous cough, asthma and palpitations.

EXTERNALLY

Anodyne Lotion. (Roux.)

Rx. Aquæ lauro-cerasi, 3 j;
— puræ, 3 iij;

Anodyne Mixture. (Roux.)

Rx. Aquæ lauro-cerasi, ʒ iv;
Etheris sulphur, ʒ j;
Extr. belladonnæ, 3 j.

Used in frictions, in nervous, rheumatic and arthritic pains.

Anodyne Cerate. (Roux.)

Rx. Aquæ lauro-cerasi, ʒ ss;
Cerati simplicis, ʒ j.

Applied to chronic and cancerous ulcers.

BITTER ALMONDS

Possesses the same property as prussic acid, is rarely used in France, but preferred to the acid in Germany.

Hydrocyanic Acid. (Schrader.)

Rx. Ol. ess. amygdal. amar. 3 j;
Alcoholis rectific.;
Aquæ destillatæ. ā ā 3 x.

Dosis, m. ij—iij ex paul aq. c. sacch. secundâ vel tertiâ horâ.

Potion of Distilled Water of Bitter Almonds. (Sundelin.)

Rx. Aq. destil. amygdal. amar, 3 ij;
Sodæ tartatris pulv. 3 ss;
Extracti cynoglossi, ʒ ij;
Aquæ destillatæ, ʒ iv.

Dosis, ʒ ss sæpe in die.

Pills of Bitter Almonds. (Kranischfeld.)

Rx. Amygd. amar. prepar, 3 j;
Sodæ sulphatis, 3 ss;
Ipecacuanhæ pulv. gr. ij;
Extract rubiæ tinctor, q. s.

Coge in massam, et in pilulas lx redige, quarum sumantur tres mane nocteque.

In obstinate cutaneous diseases.

Used in cancerous ulceration of the lips, &c.

DIGITALIS.

In large doses, digitalis very much irritates the gastro-intestinal surface and then acts on the nervous system. In small doses it sometimes augments the arterial pulsations, but in general it diminishes them in a progressive manner. Most authors attribute to it the power of diminishing the morbid secretions and of increasing absorption. It is principally administered as a sedative in nervous palpitations, hæmoptysis, asthma, nervous cough, and towards the end of pulmonary catarrh. It is used in anasarca and other dropsies on account of its diuretic property, and its action on the absorbents. The Italian practitioners regard it as a powerful contro-stimulant, and administer it in large doses in inflammatory diseases.

[Dr. Sanders of Edinburgh and Dr. Epps, are of opinion that digitalis accelerates the pulse, and acts at first as a stimulant. The latter published a valuable lecture in vol. vi, 1834, of my Journal on this remedy. T.]

Subst. Incomp. The sulphate of iron, the infusion of cinchona, and the acetate of lead.

INTERNALLY. *Powder.* Gr. ij—xij and gradually increased to ʒj—3 ss.

Infusion. 3 j—iij to Oj of boiling water.

Teinture. P. Gut. x—xx—xxx.

Teinture Éthérée. P. Gut. x—xx.

(To be continued.)

Foreign Medicine.

Extraordinary Suppression of Arterial Circulation.

M. VELPEAU communicated the following fact to the Société Médicale d'Emulation:—

A woman, sixty years old, was attacked with senile gangrene. The disease commenced in the leg, where it appeared to be stationary for some time. Subsequently it invaded the foot, and the whole lower portion of the leg became black and cold. No putrefaction supervened, and the epidermis remained sound. An inflammatory line of demarcation was formed between the gangrenous and sound portions, and a separation was expected. There were no general symptoms, and the digestive canal was in good order. Amputation was considered practicable, and would have been performed, when all at once delirium came on, the red line of demarcation disappeared, and the gangrene extended. For some days back no arterial pulsations are perceptible, even in the carotids, which, from the emaciation of the subject, may be easily felt, and which are hard and unyielding, as if filled with some coagulum. The mortified parts are cold, and their temperature lower than the surrounding atmosphere; the thermometer being at 15 deg. in the hospital ward, it was only at 2 deg. on the limb.

M. Velpeau asks, "How is it possible for this woman to exist without arterial circulation? Even the heart only beats with a dull and insensible trembling, as in the worst cases of cholera. Yet withal, the digestive and pulmonary organs perform their functions, the tongue is clean and moist, the mind clear. Yesterday, however, her expectoration was tinged with blood; probably the respiratory organs are becoming embarrassed, and the death will reveal the cause of a disease at present supposed to exist throughout the whole arterial system."—*Gazette des Hôpitaux*, April 7.

In the same periodical of the 11th of the month is an account of the post mortem examination of the above case.

During the three last days of her existence the patient expectorated black, sooty matter, resembling portions of darkened liver or spleen; to the last the digestive organs and the mind remained perfect.

In the brain, one of the basilar arteries was stopped up by a small concretion; the end of the nose was in a gangrenous state. The right lung was completely converted into spleen-like matter; there were also some old adhesions. The left lung was less changed, but still exhibited a similar kind of alteration.

The state of the vascular system did not give a satisfactory explanation of the phenomena observed in life. There were no lesions of the heart's orifices, except a small indura-

tion in one of the valves, which had no connection with gangrene. From the arch of the aorta to the lower extremities, the arteries were of a black-cherry redness throughout. M. V. remarks that this colour is not in this case a sign of inflammation, because the texture of the internal arterial membrane does not permit of its inflaming. This redness is caused by the mechanical application of the colouring matter of the blood to the internal vascular surface, and is the result of imbibition.

A large clot of blood was found in the lower part of the sphacelated limb. The venous tissue was somewhat thickened, but bore no marks of inflammation. From the preceding facts M. Velpeau concludes:—

1. That senile gangrene is not the consequence of inflammation of the arteries.
2. Nor does it depend on an affection of the blood, for in that case the viscera would also be smitten by it.
3. Nor on the stoppage of the arteries, for there was no such stoppage in this case. Neither can this gangrene be owing, as some have said, to food containing narcotico-acrid matters—ergot of rye, for instance.
4. That such matters have their own peculiar action on the system.
5. That there is no true division of the disease into gangrene of the rich, and gangrene of the poor.

On the whole, he is inclined to side with those who attribute this disease to the annihilation of the contractile function of the heart.

New Method of Effecting a Radical Cure of Hernia.

M. Gerdy proposes, 1. To push forward with the finger the skin, getting it over the finger like a glove, intruding it into the herniary aperture and canal.

2. To fix the extremity of this intruded sacciform process of skin to the anterior parietes of the herniary canal, by several stitches.

3. To inflame the cavity of this sac by ammonia, in order to establish adhesions between its surfaces, and thus obliterate the cavity.

4. To assure success by closing the external orifice by a few stitches.

This operation is but slightly painful, may be performed without making any incision, and closes the herniary orifice and canal with solid flesh. The adhesion was complete on the seventh or eighth day in a patient on whom M. Gerdy operated on the 12th of March, and who is now quite cured of the hernia. He operated in a similar manner on another patient on the 27th of March.

Reviews.

Hérissou on the Sphygmometer. Translated by Dr. E. S. Blundell, with an Improvement of the Instrument and Prefatory Remarks by the Translator. 8vo. pp. 62. London: 1835.

SMALL improvements in medicine are exceeding good when too much noise is not made about them; but we would advise ingenious men not to forget "*parturiunt montes.*" &c.

The sphygmometer, as invented by Dr. Hérissou, has already been sufficiently described in the medical journals of this country; we shall therefore only notice the modifications made in the instrument by the translator, Dr. E. S. Blundell, who thus mentions the defects in its original construction, and his own contrivances for obviating them.

"The first inconvenience which I have experienced when applying the instrument to the wrist of the patient, and which I consider of the utmost importance, is the difficulty of steadily keeping up and retaining with the hand an unvarying maximum of pressure, sufficient to make the mercury ascend to 25 deg.; to accomplish which, with the instrument as invented by Dr. Hérissou, requires more than ordinary tact, and it is to this circumstance, probably, that we are to attribute the discrepancy between the results of the minutes of the two observers, requested by the Commission of the Academy, to make their observations with the sphygmometer on the same patient*.

"The second inconvenience occurs, when the instrument is removed from the wrist of the patient, on account of the column of mercury not readily descending into the reservoir, but lingering for several minutes at the bottom part of the glass tube. This defect, which is probably owing to the quicksilver having acquired an increased temperature during its contact with the skin, obliges the operator to wait several minutes, until the mercury has returned to its former temperature, and sunk into its original station, before he can close the stop-cock, and thus shut out the communication between the reservoir and the glass tube; if this precaution be not attended to, a portion of the metal is liable to escape by the aperture at the top of the tube, and the accuracy of the instrument is thereby destroyed.

"To obviate the first of these inconveniences, I have succeeded, after repeated experiments and trials, in an invention, which

transfers the pressure to an apparatus, instead of confiding it to the hand, and by which the operator can increase or diminish the pressure, as the case may require.

"By the aid of the above improvement, another most important result is obtained, for, as the sphygmometer is firmly fixed in a vertical position over the artery, the hands of the practitioner are perfectly at liberty to note down any phenomena that may arise.

"The improvement which I have made in the construction of the sphygmometer, in order to avoid the second inconvenience, consists in placing the stop-cock nearly an inch higher, as close as possible to the insertion of the capillary glass tube into the stem, so that, the instant the instrument is removed from the pulse, the operator turns the stop-cock, and the mercury is secured."

Dr. Hérissou believes that the sphygmometer is of great utility in the diagnosis of organic diseases of the heart, especially at the early period, when remedial means can alone be effectual; and when, in his opinion, the ordinary methods of exploration entirely fail in detecting them. For the benefit of such of our readers as may be sphygmometrically inclined, we shall briefly note the signs of those organic lesions of the heart to whose detection the instrument is alleged to be applicable."

Contraction of the Right Auriculo-Ventricular Orifice.

"In the contraction of the right auriculo-ventricular orifice the sphygmometer presents this peculiar phenomenon: the column of mercury does not always descend to the point from whence it started, or it requires two intervals to reach that point; it is surprised near the middle by an incidental impulsion which divides it."

Right Ventriculo-Pulmonary Contraction.

"As the ventricle makes considerable efforts to overcome the obstacle opposed to the passage of the blood into the pulmonary artery, it produces in the heart all those movements which we are accustomed to denominate palpitations, which are extremely violent, and in no relation whatever with the action of the artery. Hence the pulse is feeble, trembling, agitated; it presents the same sphygmometric signs."

Left Auriculo-Ventricular Contraction.

"The movements of the heart are soft; the pulse is feeble, irregular, intermittent, unequal, but much more so than in contractions of the orifices on the right side; and I find a satisfactory reason for it, in the chemical difference of the blood which reaches the ventricle. Indeed, if the blood arrive slowly into the lungs, their action is diminished; if, on

* "Vide Athenæum, No. 373, Dec. 20, 1834, p. 922."

the contrary, the blood get there with facility, the action of the lungs is increased. In the first case, the blood being less oxygenated, and consequently less stimulating, imparts a moderate activity to the left cavities; in the second case, this activity, on the contrary, will be very great, for the blood will have regenerated itself in a more easy respiration, and the action which it exercises upon the left cavities will there produce very considerable activity, particularly if it experience any obstacle in its passage; the consequence as regards the pulse in that case is a greater irregularity; it also may happen that the left ventricle ceases to act until it has been able to admit a certain quantity of blood. Under both circumstances, the arteries are almost empty, and this state is clearly proved by their sinking under the sphygmometric column which descends below its level, in the proportion of one, two, and even three degrees, according to the volume of the explored artery, and the power of the obstacle which opposes the passage of the blood into the left ventricle."

Ventriculo-Aortic Contraction.

Here the same vacuity of the arteries is indicated by the same sphygmometric signs as in the preceding case.

Hypertrophy of the Heart without any Contraction of the Orifices.

"The pulse is regular, but unequal in its contractions; it presents this anomaly, that the column of mercury, after having been elevated to a certain number of degrees, we will say 3 or 4, ascends suddenly by intervals to 8, 10, and even 15 degrees. A simple hypertrophy of the left ventricle of the heart is constantly exhibiting this peculiar character of the pulse. The dilatation of the left ventricle and of its auricle, presents the same sphygmometric signs as those of the auriculo-ventricular and the ventriculo-aortic contractions. Auscultation, percussion, mensuration, and the examination of the other vital functions, will serve to distinguish advanced organic lesions from the contractions or vegetations which are beginning to develop themselves."

The sphygmometer used for the heart must, of course, be on an enlarged scale; in other respects it is similar to the small one used for the pulse.

A table is added, in which necroscopic researches are recorded, corroborative of the diagnosis afforded by the sphygmometer.

For our own part, we have very great confidence in our fingers for the exploration of the pulse, and no small faith in our ears, assisted by the symptoms, for that of the heart; nevertheless, we cannot see any rea-

son why our brethren should not, each and severally, provide themselves with sphygmometers, large and small, and proceed straightway to bring the merits of this ingenious instrument to the test of experience.

—o—

EXTRAORDINARY CASES OF POISONING
WITH ARSENIC.

We quote this case in full, though some of the details are rather too minute for many of our readers; but if we omitted them, the narrative would be imperfect. The cases are thus recorded in a French Journal:

A case of extraordinary depravity came on before the Court of Assizes of the Hesse-Hernane (Mayence), on the 22d March last, and occupied the court for the four following days consecutively. It was the trial of two women, each charged with having poisoned her husband, and one of them with having, in addition, poisoned her father, her mother, three of her children, and her paternal uncle. The judicial annals afford few instances of so shocking a series of crimes as that developed in the Court of Mayence in these five days.

Gregoire Toll, and his wife Regina Hof, working people at Abenheim, in the province of the Hesse-Rhenane, the *ci-devant* department of Mont-Tonnere, were entitled to some considerable property upon the death of Mathias Toll, the brother of Gregoire. They had both the reputation of honest and industrious people. They had two children; a son, as a conscript, entered the French service in the year 1811, and disappeared in the Russian campaign; and a daughter named Marguerite, one of the two prisoners, who, in the absence of her brother, conceived the idea of getting possession of the inheritance, to which she would be eventually entitled, by the most infamous means. Having naturally a taste for pleasure, and the advantages of a handsome face and beautiful person, Marguerite devoted herself to *fetes-champetre* and other light amusements, in the enjoyment of which she was encouraged by her parents, of whom she was the idol; and when, with all their economy, they could not supply the means, she contrived to procure them by clandestinely selling the fruit or other produce of the farm, the necessary concealment of which led to falsehoods, and from thence hypocrisy became the prevailing feature in her character.

At one of these *fetes-champetre* she became acquainted with Leonard Jaeger, a farm servant at Abenheim, whom she married in August, 1811, against the will of her parents. Of this marriage there were seven children. Her dissipation and aversion to industry brought trouble into her family, and frequently caused a quarrel between her and her husband.

Jaeger, despairing of her amendment,

himself up to debaucheries, to enable him to indulge in which he contracted usurious engagements with some Jews, and thus the patrimony of Marguerite was dissipated in the lifetime of her father and mother, whose reproaches only inflamed the rage of their son-in-law, and caused him frequently to treat his wife with great brutality. Once, when cracking his whip in a passion, he cut out one of his eyes, and shortly after, in a fit of intoxication, he broke a leg. The least contradiction made him mad, particularly if it related to domestic affairs.

Things went on in this state until the death of Mathias Toll, the brother of Gregoire, and uncle of Marguerite Regina Hof, the wife of Gregoire, after languishing for some time in consequence of the misconduct of her son-in-law, died in 1826, and Gregoire, the father, died 1830. The deaths of these persons, who were in years, appeared natural events, but the catastrophes which succeeded excited suspicion. Leonard Jaeger died in August, 1831, aged 37, and in the December following the grave opened for three of his daughters, aged three, five, and ten years, respectively. It was generally reported that symptoms of poisoning were discovered in the last of these deaths. The widow Jaeger conducted herself with unpardonable levity on the death of her husband, and several expressions used by her were related, which showed the little affection she felt for her children. The magistrate of Abenheim enjoined the Justice of Peace to investigate the case. The body of Catherine Jaeger was disinterred. It was inspected by professional men. The contents of the stomach and bowels were analysed by chemists, but no trace of poison was found, and the inquiry led to no further result.

These proceedings might have been a salutary warning to Marguerite Jaeger if her depravity had not led her to another crime. The annihilation of the little patrimony which she derived from her father and mother reduced her to the necessity of putting her two surviving children out to service, the two others having died in 1829.

Towards the end of July, 1833, she herself entered as servant into the family of Jean Philippe Renter, an innkeeper at Worms. He was a man of substance, with a wife and four children, but this family was also a prey to conjugal strife. Renter by degrees neglected his business, and gave himself up to intoxication. Quarrels with his wife frequently succeeded, which she bore with resignation, but there was no reason to presume that she meditated to relieve herself from her situation by an attempt on the life of her husband, whose health was visibly on the decline from the immoderate use of spirituous liquors. This horrible idea, as appeared in the sequel, was suggested to her by the widow Jaeger.

Renter fell suddenly sick on the 27th of August, 1833, and was carried off in two days. A few weeks afterwards the widow

Jaeger herself was conveyed to the Hospital of Worms. Her malady was considered very dangerous, and despairing of her recovery, she made a discovery to the physician of the hospital, which left no doubt that Renter had perished by poison. The Commissary of Police soon visited the widow Jaeger, and interrogated her, and received from her a fresh confession. Contrary to expectation she recovered, and repeated the same story. The investigation, commenced in the year 1831, after the suspected deaths of the three children, was resumed. This unnatural mother, wife, and daughter, explained in full detail the means employed for the destruction of her victims. Her method did not consist, like that of common poisoners, in throwing arsenic in powder into their food. She boiled a certain quantity of arsenic in a pint of water, strained the liquid when cold through a piece of linen, and mixed this water in a glass of wine, a cup of milk, or some broth, and the result was, the arsenic thus extremely divided could not be discovered in the intestines of the person to whom it was administered. Professional men to whom she explained her diabolical process made an experiment with it upon a calf and a pig. These animals died with astonishing rapidity, and their bowels on examination presented no trace of poison.

Being interrogated as to the manner in which she was initiated in such secrets, she pretended at first that a diplomatist, sent from a foreign power, and decorated with several orders, having lodged for some time at the inn of Renter, had communicated to her this convenient mode of getting rid of an enemy, and at the same time securing impunity for herself. More lately she said it was her own father who had imparted to her the secret; that burning with a desire to appropriate to himself the succession to the property enjoyed by his brother Mathias, he had taught her how to get rid of her uncle. That with this view he had studied the use of poisons, and discovered things which the ablest chemist considered impossible.

This woman, in her defence, displayed extraordinary presence of mind, and answered every objection; but she could not deny that she had taken the lives of her father, mother, and husband, although she employed the most singular artifice to palliate those horrible crimes. As to her children, she pretended they had been poisoned through mistake. She kept in reserve a decoction of this arsenic, prepared after a method which a person unknown, or her father himself, had shown her; and that her daughters, finding this bottle, had the curiosity to taste it, so that she had nothing to reproach herself with on account of their deaths. The life of the innkeeper of Worms she said she attempted only from compassion for the woman Renter, and after long entreaty.

The woman Renter was far from agreeing on this point with her accomplice. If

she was to be believed, she was ignorant that the fatal beverage contained arsenic. She thought it was only a drug to cure him of his passion for brandy.

The Jury found both prisoners Guilty—the former of having poisoned her father, mother, her paternal uncle, her husband, and her three daughters, and both as accomplices in the poisoning of Renter, and the Court passed upon them sentence of death.

[These cases are by no means clearly stated, nor satisfactory to medical jurists. They are within the range of possibility, though exceedingly improbable. The frequent administration of small quantities of arsenic mixed with food might induce gastro-enteritis, but that very small quantities could cause a death in two days, as in the case of Renter, is contrary to the observation of the most experienced physicians and toxicologists. We have stated in our translation of the Practical Formulary of Hospitals, that Fowler's solution administered freely in agues often destroys life; but not so suddenly as in one of the cases above related. These cases remind us of the slow poisoning in former ages, if we except the case of Renter.—ED.]

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On the Employment of Nux Vomica and its Preparations in Dysentery.

THE able editor of our contemporary, the *N. A. Archives of Medical and Surgical Science* states, that having been particularly embarrassed and disappointed in the management of dysentery during the two last autumns, in the Baltimore Infirmary, he has been within a short time induced to make trial of the nux vomica in some cases of this disease. "We have as yet only had an opportunity of using it in a few cases," he observes, "and those not of the worst character, yet so difficult to manage, that some of them had previously resisted all our remedies. The cases selected were those which were not attended with much febrile excitement, but which were characterized by frequent calls to stool, considerable griping and bearing down, and an inability to pass any thing but mucus, or that material streaked with blood. In some of the cases, the remedy, though certainly beneficial, was not competent alone to accomplish a cure; in others, its good effects were so striking, as to inspire considerable confidence in its virtues, and to induce us to make this notice, and with the view of inciting others to give it a fair trial under similar circumstances. We do not wish to recommend it to the exclusion of other means, or to inspire a hope that it will be found capable of itself of curing the disease in a large number of cases. But from what we have seen of its effects, we feel assured that it will be found a useful adjuvant, and that in some cases at least it will afford relief when other remedies fail.

"We recommend at first to administer the nux vomica in powder, in doses of seven grains, three times a-day, as recommended by Vaux of Ipswich, England. In one individual, to whom the article was administered in this form, the good effects were prompt. The griping, tenesmus, and frequent calls to stool were speedily checked; the discharges became natural, and the patient, who had suffered much, and had failed to obtain relief from the treatment previously prescribed, expressed himself delighted with the remedy. It was also beneficial in other cases, as were the alcoholic extract of Pelletier, administered in doses of two grains, three times a day, and the strychnia, given in the form of an acetate, in doses of 1-12th to 1-6th of a grain, formed by dissolving the strychnia in acetic acid. Our comparative trials of the different preparations of the article have as yet been too limited to enable us to decide which deserves the preference; but we are inclined to prefer the powder, and next to that the extract. It will perhaps be beneficial to combine with whatever form is employed, a small quantity of opium or some of its preparations."

The good effects of nux vomica in several of the affections of the mucous membrane of the digestive organs, have long been known, but it is highly probable that the remedy has not been so generally employed as it deserves. Hagström, a Swedish physician, was, we believe, the first who recommended it in dysentery, and his testimony in its favour was of the most flattering character. The celebrated Hufeland states that he derived great benefit from it in the treatment of epidemic dysentery; and Thomann remarks, that he has seen it effectual in allaying the tormina, and abating the inclination to go to stool. Richter observes, in reference to the efficacy of this remedy in dysentery, that the extract, like opium, tends directly to allay the irritation of the alimentary canal, and subjoins, that combined with the article just mentioned, it proves beneficial where opium alone fails to do so. The following is the form in which he administers it:—*Rx. Extract. nucis vomic. ℥ss; Mucilag. gum mimos. ʒi; Aquæ font. ʒvi; Syrup. althæi, ʒi. M. S. Two table-spoonful every two hours.*

"By Most, a recent writer, this article is especially recommended in what he denominates *pituitous dysentery*, and he remarks, that when the disease is protracted, the article may be administered in the following form for several days in succession, with great advantage:—*Rx. Nuc. vomic. ʒi; Infunde in aqua ferv. q.s. Digere per ½ hor ut reman. ʒvi; Col. adde Tinct. opii simp. ʒss. M. S. A table-spoonful every two hours.*

"We find the following very flattering account of the efficacy of nux vomica in dysentery, in Armstrong's Lectures, recent-

ly published:—‘A friend of mine, Mr. George Vaux, of Ipswich, has tried a remedy for sixteen years, in about two hundred cases (*i. e.* in dysentery), and the result has been so successful, and so remarkably uniform, that I feel it my duty to mention the treatment here. This gentleman gives in dysentery, or inflammation of the mucous membrane about the colon, seven grains of *nux vomica* thrice daily. It neither purges nor constipates, but removes the inflammation, and healthy evacuations follow. Mr. Vaux, who resides in London, bears similar testimony to the value of this remedy, and I strongly recommend it to your notice. I shall certainly try it in the next case I meet with. It seems to operate as a kind of specific.’

“By Mr. Frisch, a German physician of celebrity, the remedy is highly recommended. He remarks, that in those forms of diarrhoea dependent upon a subacute inflammation of the mucous membrane of the intestines, which are attended with frequent discharges of tenacious mucus, and much griping and tenesmus, no remedy is so effectual as *nux vomica*. Its efficacy in diarrhoea has also been testified by others. In a case of chronic diarrhoea, in an individual of a nervous temperament, Professor Récamier administered the alcoholic extract of *nux vomica*, in doses of $\frac{1}{4}$ th of a grain, with complete success, after various remedies had been resorted to ineffectually.

“From these remarks it will be seen that the remedy is at least deserving further trial. To expect it to perform the part of a specific would be an absurdity, nor would it be reasonable to expect much from it in the acute stage of dysentery. But after suitable depletion, and especially when the disease is verging upon a chronic form, we doubt not it will be found useful. Our own experience with it, as yet, has been limited; but we propose to it a fair trial, and in the mean time, as truth is our only object, we shall be glad if these observations should serve to induce some of our professional brethren to test its efficacy. Should any of them do so, we should be pleased to receive the results of their experience.”—*American Journal of the Medical Sciences*, Feb. 1835.

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Singular Condition of the Knee-joint of a New-born Infant.

DR. D. W. BARD, of Troy, Vermont, has communicated to our contemporary, the *Boston Medical and Surgical Journal* (Nov. 26, 1834), a remarkable case, in a new-born infant, in which “the leg turned up forward on the thigh, the bottom of the foot presenting directly forward, the toes turned toward the face of the child, and the heel from it.” The attendants were not aware of any injury being sustained during the delivery, which had been natural, and accomplished

by the unaided efforts of nature. Dr. B. found that on drawing the leg gradually and gently towards himself, it immediately assumed its natural position and shape; but when left to itself, it began directly to move upward; the knee flattened upon the top; swelled out a little beneath, but none on either side. When the leg had arrived at about a right angle with the thigh, its motion became more rapid, till it was checked by the clothes, or the integuments of the lower part of the thigh and upper part of the leg. It was easily drawn back; and when the leg had arrived at nearly a right angle with the thigh, the amount of force required to carry on the motion was still less, and continued to diminish until the limb became straight. Flexion of the leg upon the thigh was performed with the usual ease. No motion of the limb appeared to give the child pain. The limb was confined in a proper position by bandages, for a short time, and the leg did not afterwards show any inclination to return to its unnatural situation. The child did well, and when it began to use its legs no difference could be discovered between them.”—*Op. cit.*

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THE HONEY OF TREBIZOND.

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IN a letter from Keith Abbott, Esq., to the Secretary of the Zoological Society, is an account of this famous honey, spoken of by Xenophon as having produced the effects of temporary madness, or rather drunkenness, on the whole army who ate of it, without causing any serious consequences. “It is supposed to be,” he observes, “from the flower of *azalea pontica*, that the bees extract this honey, that plant growing in abundance in this part of the country, and its blossoms emitting the most exquisite odour. The effect which it has on those who eat it, is, as I have myself witnessed, precisely that which Xenophon describes. When taken in a small quantity, it causes violent headache and vomiting, and the unhappy individual who swallows it, resembles as much as possible a tipsy man; and a large dose will completely deprive him of all his senses.”

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ROYAL HUMANE SOCIETY.

FROM the report of this Society, it appears that 25,000 persons have been rewarded for risking their lives to preserve others; and more than 60,000 persons rescued from apparent death.

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Contribution to the History of Vaccination. THE following fact, illustrative of the value of the Jennerian discovery, seems worth recording. A granddaughter of Mrs. M.’s was attacked in April, 1833, with small-pox, which ran its course and terminated favourably. About six weeks

afterwards, viz. on the 1st of June, Mrs. M.'s daughter and grandson (residing in the same house with the first patient), the former aged thirty-five, the latter eighteen, were attacked with head ache and fever, followed on the third day by an eruption which presented the ordinary features of varioloid, and ran the usual course of that disease. The eruptive fever in the grandson was very mild, but three pocks appeared on his face, and proportionally few on his body. On the tenth day he had sufficiently recovered to go abroad. The daughter had severe head-ache and high eruptive fever, had forty-three pocks on her face, and a proportional number on the rest of her person.

When children, the grandson had been vaccinated, and the daughter innoculated. The latter had the small-pox at that time, (as the mother informed me), pretty severely, had several pocks, and subsequently she had had chicken-pox.—*American Journal of the Medical Sciences.*

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The London Medical

AND

Surgical Journal.

Saturday, April 25th, 1835.

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ONCE MORE, BUT NOT FOR THE LAST TIME—WHAT ARE THE TWENTY-TWO DOING?

UNLESS the organ of the College of Physicians has been throwing dust in the eyes of the profession (which, by the way, is not at all improbable), it is the serious intention of that learned body to subject itself to a spontaneous and very extensive reformation. So sweeping, indeed, are the contemplated changes, that the out-door friends of the College, to wit a few apothecaries who have filled their pockets by the "good understanding" system, in other words by officiating as lackeys to the fellows, are apprehensive that the latter, seized with some dire delusion, have passed from one extreme to another—have become mere *sans-culottes*, and, hanging up their breeches as votive offerings to Æsculapius, are about to dance, in the disencumbered wildness of democratic fury, over the ruins of all that is venerable in our medical institutions. However this may be, it is clear that the College regards the de-

mand for reform as too powerful to be openly resisted, and is resolved either to cajole the profession, or to yield to it.

But there is another College whose intentions are less obvious. What course do the twenty-two fine fellows of Lincoln's Inn mean to pursue? Not a whisper is afloat by which we may guess at the secrets of their prison-house; one of three suppositions, however, must be adopted to explain the mystery: either the twenty-two are so stupified with the consciousness of detected guilt, and approaching retribution, that they lack wit to frame a device, or they mean to overwhelm their adversaries by a grand and unexpected burst of liberality, or they are determined to stand their ground to the last, and die with harness on their backs. The first supposition is the most natural, but the last, we fear, the most probable; and if it be actually true, the twenty-two have certainly acquired one title to admiration—they are the gamest men alive!

They must be endowed with no small magnanimity, who can stand firm when the arm of public justice is uplifted to crush them; when the voice of an outraged profession is loud against them; and when the consciousness of deep and long continued iniquity "cows their better part of man:" they must indeed have

—robur et æs triplex
Circæ pectus!

But can they not be persuaded? Will they persist in courting disgrace and ruin, rather than perform a few acts, not of generosity—no one asks it of them—but of plain justice and common decency? We tell them there is only one way to avoid impending destruction; that way is to give up at once the self-perpetuating system. It may be urged that the council was originally constituted on this principle; it was: but how could it have entered the mind of any human being, that a council

framed to perpetuate itself by selection from the members of the College, should limit that selection to a small and inconsiderable body of surgeons, to the entire exclusion of nine-tenths of the members, who are thus utterly shut out from all participation in the government of their own College?

The fact that such an abuse can exist, ought for ever to prevent any corporate body from being again constituted on the same principle, and would now lead to the immediate abolition of that principle, if the twenty-two had a spark of good or honourable feeling among them. The College will never be anything but an object of detestation and ridicule to the great body of English surgeons, till the council is elected by the members, and every member is eligible to the council.

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PARISH JOBBING.

SOME time ago we alluded to the rumour that the parochial officers of Saint Anne, Soho, were about to elect to the office of surgeon of the parish, an individual who we have heard was unable to exhibit those legal qualifications of medical education, that are generally and very properly required from candidates for public responsible situations. We are grieved to state, that the churchwardens and overseers have allowed their personal predilections to outweigh their sense of public duty, and have elected the individual in question. Meantime, though the election was made only a fortnight since, a requisition signed by ninety-one rate payers, calling on the churchwardens to convene a vestry for the purpose of taking their choice into consideration, has been got up. The churchwardens have thought proper to refuse a vestry for such a purpose, and a statement of the whole case has, we understand, been forwarded to the Poor Law Commissioners, for their opinion and interference.

The object of the requisitionists is a double one: first, to wrest the election

of the medical officer from the hands of the parochial officers, and place it in those of the parish at large; and next to, by this means, introduce a certain apothecary of their own way of thinking, into the vacant situation. Now, against the popular election of a professional medical officer, we loudly protest. The profession is already sufficiently buffeted by the public, and it only requires the degrading begging from door to door, for the "sweet voices" of the "unwashed," to plunge it irrecoverably in the slough of contempt. Let our readers only imagine the annual canvass of an extensive parish (for the office of surgeon is annual), and say whether it is probable that men of refined minds, and extensive acquirements, would submit themselves to it! For ourselves, we very much doubt the *patriotic* motives of the promoters of this parochial *emeute*; it is not so much dislike of the principle of electing a person *if* non-qualified, as the desire of placing their own man—be he what he may—into the office, that actuates these Hampdens on a small scale. The principle of popular election once established in such a ~~matter~~, we shall find the man that can knock at the greatest number of doors in a given time, and *romance* with the greatest volubility, carry important and responsible appointments over others, who display indeed a minor aptitude in these accomplishments, but possess the more desirable attributes of medical skill and humanity.

The just and most advisable mode of proceeding is, that the parochial officers should recal their appointment, and choose some one against whom no objection on the score of legal disqualification can be brought. We say legal; and surely the officers can have but little idea of the fearful responsibility to which they are exposing themselves, by persisting in their choice of a person (if) without a legal qualification to practice, or to give medical evidence in

legal inquiries In what situation will they be placed, should the sudden or mysterious death of some inmate of the workhouse necessitate the calling of an inquest to look into the cause of the event? Why, the evidence of their medical officer would be refused: it would be refused in the coroner's, as well as in every other court of the land; his opinion, unless legally qualified to practice, is worth no more than that of any other individual, who is not, even as he is, practising medicine. The confusion likely to arise from such deficiency on his part, would assuredly be laid at the door of those who deliberately and knowingly made choice of him. We, therefore, once more advise them to reconsider the question, and act from prudential as well as from just motives.

In a neighbouring parish—St. Martin in the Fields—the gentleman who has for many years served, and, from all that we have heard, served faithfully and skilfully the office of surgeon, has been ejected, and replaced by a Mr. Bainbridge, the idol of a party now dominant in the parish. We doubt not that gentleman's capability to do justice to the appointment, but this we are certain of, that had he been ever so unfit for it, the party in question would have chosen him. Here then is an instance *per contra*: parties of opposite shades govern in these parishes, and medical men are chosen by the colours they bear. What on earth has party to do with the knowledge of disease, and the capability of treating it?

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SUGGESTIONS TO RENDER LESS FREQUENT THE CRIME OF POISONING—A HINT TO MR. WARBURTON.

It ought to be the law in every civilized country, that poisons should not be sold in any quantity, however small, to non-professional persons, as they can go from druggist to druggist until they procure a sufficient quantity to destroy life. This plan was adopted by Bishop

and Williams, the murderers of the Italian boy. One of them went from shop to shop, bought a pennyworth of laudanum in each, until he had accumulated a sufficient quantity to destroy his victim. This he mixed with porter, administered it to the unfortunate youth, and when it narcotized him, put him head foremost into a well; suffocation was the immediate result. The remedy for the frequency of the horrible crime of poisoning is simple. It is this, that no chemist, druggist, apothecary, or vender of medicines, should ever sell any quantity of a poison, opium, prussic acid, henbane, fox-glove, hemlock, nux vomica, arsenic, corrosive sublimate, &c. &c., to any person whatever, unless he or she produced the prescription of a legally qualified medical practitioner—under a penalty of ten or twenty pounds, to be recovered before a justice of the peace. All the poisons are most valuable remedies in small doses. Moreover, these substances should be kept apart from ordinary medicines, and never dispensed by apprentices, under the like penalty. The neglect of this precaution has been the destruction of thousands. Many have been poisoned by oxalic acid sold for Epsom salts, others by nitre sold for Glauber salts, more by oil of tar substituted for the black draught, &c. &c.

The Irish Apothecaries' Act does not allow arsenic to be sold indiscriminately; but omits all the other poisons. In England there are no apothecaries; those qualified as such are medical practitioners, the physicians of the poor and middle classes, who leave the vending and compounding of poisonous medicines to their school-boy apprentices, persons totally incompetent to discharge this serious duty. In this country too, our chemists and druggists who have received no medical education, are in reality our apothecaries, and the sale of poisons is simply a matter of pounds, shillings, and pence, with them. These facts were most amply proved

before Mr. Warburton's committee, and must be abated by the medical reform bill. There ought, must, shall, and will be some competent persons to prepare and compound dangerous, or poisonous medicines. If apothecaries will not discharge this duty, chemists and druggists ought to be educated and perform it.

A French writer has proposed to add colouring, bitter, and odoriferous medicines to poisons; but this plan is imperfect and objectionable. It requires the greatest caution and skill at all times to prescribe poisonous medicines; and to vend them indiscriminately to non-professional persons is neither more nor less than homicidal; and, for the consideration of a penny or a sixpence, is human life endangered or destroyed. Our statement is not exaggerated. Let any one peruse a file of any of the leading newspapers for a year, and he will find numerous examples of individuals destroyed by laudanum, prussic acid, arsenic, &c. &c.; he will also learn, that persons seduced into the scenes of vice, are first narcotized, then robbed, and often murdered. Such enormities cannot continue longer in an age so enlightened as the present, or in a country the most civilized in the world.

If the public press would only aid us in diffusing our sentiments among society, the monstrous evils we have portrayed would be speedily abated by the legislature.

We hope and trust, that our hint will not be lost sight of by Mr. Warburton, and the Parliamentary Committee on Medical Education and Practice, over which he so ably and zealously presided. We agree with an eminent statesman, that Mr. Warburton, in carrying the anatomical bill into a law, has done more for humanity than any member of either House of Parliament; and we feel fully convinced, that his medical reform bill will be based on impartial justice and expediency, and will

hand his name down to posterity as one of the greatest benefactors to his species. In saying this, we must observe, that we have not the honour of his personal acquaintance; but having attentively watched his progress on the occasion alluded to, we observed that public good, and the improvement of our profession, were his sole objects; while the glorious axiom of Magna Charta was the leading star—"*Salus populi, suprema lex esto*," the enormities of each university, each college, each monopoly, were exposed, and doomed to be annihilated.

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THE PHYSICIANS OF THE FRENCH REVOLUTION.

AMONG the professions that were particularly active in the revolution, the lawyers and medical men were especially distinguished. And though the latter did not possess the same influence as the lawyers, they nevertheless played a remarkable part in the stormy scenes of this stupendous event. Many of them entered into the hazardous career which had raised the lowest citizen to power and renown. Of some of them the names are engraved on the iron page of history; others are lost in the names, committees, directories, &c. Among the former are found, though in widely different degree, and with widely different principles, Marat, Guillotin, Chambon de Montaux, Barthez, Le Hardy, Lanthenas, Guiton-Morvau, Cabanis, Baudat, Bo, Bousquet, Du Gers, Clede, Dubouchet, Thery, Fourcroy, Lavoisier, Pelissier, Plaichard-Chatteire, Taillefer, &c.

Who has failed to hear the character and fate of John-Paul Marat? Every one knows that he was strangled in a bath in the Rue du Paon by a young and beautiful girl, that his body was conveyed to the Pantheon, and afterwards, at the commotion of Thermidor, thrown into the common sewer: that after burning his effigy, the ashes of the figure were placed in a chamber-pot and cast into the Montmartre sink. But it is not equally well known that Marat, previous to the time when revolutionary

ideas so violently took possession of and agitated his mind, was of a mild and peaceable temperament. Then he was devoted to science, and ten or twelve works proceeded from his pen, which were not without merit; witness his "*Traité de l'Homme*." Though born in the neighbourhood of Neufchatel, in Switzerland, Marat practised his profession in Paris; his name is to be seen inscribed in the books of the Faculty of Medicine for the year 1785. At that time he lived in the Rue de Bourgogne, and was for some time attached to the Guards of the Duc d'Artois, since Charles the 10th. Marat was a thick short man, with a vulgar countenance, traversed with the restless expressions of envy and pride, a countenance that gave evidence of a low uncompromising ferocity; withal his stature was unattractive and his manners inelegant. Yet his language and style were in singular contrast with what he had always hitherto been. Who could fancy the same man in the author of the "*Traité on Medical Electricity*," and the editor of that journal of horrors, *l'Ami du Peuple*? Marat was certainly insane: the scent of blood drove the old puritan of the Mountains partly from his reason!

Very different from this fiery demagogue was Joseph Ignatius Guillotin the deputy from Saintis. Mild, benevolent, the sincere friend of humanity, he sought only to be useful to his species, even when he invented the fatal instrument which bears his name. When the legislative assembly had determined that there should be but one kind of mortal punishment, and that it should be decapitation, Guillotin laboured unceasingly to find the means of rendering the last moments less painful. It has been asserted that the instrument he proposed had been long before used in China: no proof of this is however adduced. But it cannot be doubted that in the 16th century, an instrument bearing a strong resemblance to his was employed in Italy, for the purpose of amputating limbs. It became necessary to abandon it in consequence of the crushing and injury done to the bone by its action. Be this as it may, Guillotin thought that a similar instrument, carefully modified, might attain the end he had in view. So occupied was he with the subject, that he

was continually repeating to his friends and colleagues, "With my instrument I will take off your heads in a twinkling, and without the slightest suffering." This enthusiasm caused more than one epigram to be launched at him, of one of which the following lines form the commencement, being sung to the air of the *Kaudet*.

" Guillotin,
Medecin
Politique,

Invente un beau matin
Que pendre est inhumain
Et peu patriotique," &c.

Very lately the correspondence of M. Roederer, regarding the mode of decollation proposed by Guillotin has been published, but it presents nothing worthy of interest. Guillotin's own report on his instrument would have been much more interesting, including his experiments with it previous to his definitive proposal of it to the government; as would also have been the report and correspondence of Louis, secretary of the Academy of Surgery, on the same subject. Guillotin's instrument was tried on five bodies lying in the Bicêtre, and its success at first appeared to be complete. When, however, for the first time employed in its real capacity, the decapitation was imperfectly performed; indeed so badly effected was it, that, had not an armed force interfered, the people would in their fury have broken up the instrument; besides which, the basket for the reception of the head not being then known, the scaffold was inundated with blood. Louis on being consulted, remarked, that if the section of the neck would be perfect, if, instead of having the "*contenance de la loi*," as the blade was denominated, horizontal, an oblique direction were given to it, and this on the principle that all cutting instruments act by sawing. The hint was followed up; and with what frightful precision the machine has fulfilled its office since then, is well known. The success indeed was such, and so immediate, that it was proposed to call the instrument the "*Louissette*," to do honour to the great surgeon who had brought it to perfection; but the former name was already fixed in the popular mind. Here was a strange fatality: while the name of Columbus was never attached to his vast discovery,

that of Guillotin could never be detached from his invention. Guillotin lived many years after the date of his discovery; nothing pained him more than the mention of his instrument, and horrible recollections shook him when, as sometimes happened, some mischievous fool addressed him with "Why, doctor, how come you to have escaped—you know *what* death?" He died in 1814 of a large carbuncle on the left shoulder. His *confrere*, Bourru, delivered his funeral oration, the same Bourru who, in 1793, *re-baptized* his two sons, and called one Hippocrates, and the other Galen.

Barthez, piqued against certain of the nobility, and particularly against the Duc d'Orleans, whose medical attendant he had been, adopted the doctrines of the revolution. On the opening of the States-General he put forth a pamphlet entitled, "*Libre discours sur la prerogative que doit avoir la noblesse dans la constitution et dans les états generaux de la France.*" (A free inquiry into the right of the nobility to form part of the constitution and States-General of France).

This publication might have proved fatal to him, for the populace very shortly after came and broke the windows of the aristocratic physician. Barthez, whose *foible* was certainly not long-suffering, became furious and cried out to them, "You may break my windows, but I defy you to destroy my arguments." However, he afterwards prudently kept out of the way, and left Paris for Montpellier.

Le Hardy was a good-natured Breton, who entered warmly into the cause of the revolution, but detested its excesses, although he held the presbyterian doctrine of the responsibility of kings to the people. Le Hardy sided with the party of the Gironde and perished with it. An anecdote is told of Le Hardy, that having examined the body of Valagé, who had stabbed himself during the session of the Convention, he said, "The wound is through the heart and he is dead." "Then, doctor," replied Vergniaud, "Sacrifice a cock to Esculapius, for here is one of your patients cured."

Lanthenas, the physician, who was included in the same prosecution as Le Hardy, was however more fortunate than him, for Marat erased his name from the list, as

poor-spirited, too paltry even for the guillotin.

Thus the medical men were not spared in the general slaughter of the first French revolution. Punishment even awaited their minor offences. Thus the health-officers of the military hospital of a town in the north of France, having failed to make their appearance in the popular society of the place, the representative of the people, Lebon, ordered them to come, in a letter bearing the gracious protocol, "*Citoyens, purgons, citoyens bistouris, et vous canules, vous êtes invites, &c.*" (Citizen purgers, bistouris and canulas, you are invited, &c.) Thus too a chemist of Paris, having taken for his device the words "*Ventre libre ou mourir,*" (Open bowels or death), with two clyster syringes *rampant* for supporters, the joke had nearly cost him dear; he was brought to trial, and it was for some time debated whether he should not have a close view of and perhaps a closer knowledge of the guillotin.—(From the *Fouilleton* of the *Gazette Medicale* of April 4.)

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Hospital Reports.

WESTMINSTER HOSPITAL.

Ovarian Disease—Abscess opening in the Groin.

MARCH 2nd.—Maria Bassett, aged 43, was admitted into the hospital, Jan. 2nd, under the care of Mr. White; it being the third time of her being in the hospital during the last two years. On the first of these occasions she was under the care of Dr. Roe, and on the second, under that of the late Sir George Tuthill, at the period of her admission; but the case being considered as admitting rather of surgical than medical aid, she was both times transferred to the care of Mr. White.

Her history is as follows. She is a married woman, and the mother of ten children; on the occasion of her last pregnancy, two years ago, she had a miscarriage, and subsequent to this the present affection commenced. A tumour appeared in the left groin, which gradually increased in size, and at this period she was first admitted into the hospital. Mr. White inclined to believe that the seat of the tumour was the left ovary. However, after remaining some time in the hospital, the tumour gradually became more superficial, and at last afforded marks of fluctuation; in fact, an abscess presented in the groin, which on being opened, discharged a considerable quantity of matter. She now obtained speedy relief, and soon left

the hospital. She has not menstruated since. About twelve months since, having been quite well for a period of about six months, she was a second time admitted into the hospital, with indefinite complaints referrible to the same seat, and after remaining there for about four months, these terminated in the appearance of a second tumour of a chronic inflammatory kind, which, on being evacuated, afforded her corresponding relief, and she soon got well, and returned home. Half a year had scarcely elapsed before she had a third return of the affection, which was ushered in with rigors and perspirations. Retention of urine was produced by pressure on the urethra, for which Mr. Hancock, who attended her as an out-patient at her own house, had to employ the catheter daily. As the case required constant attention, she was at this period received into the hospital. The tumour increased rapidly in size, progressively extending from the left iliac region into the hypogastric and right iliac, and at last invading the umbilical and epigastric regions; it finally equalled in size the uterine tumour of a female at the full period of gestation. The tumour was attended with excessive pain in the iliac and hypogastric regions, with occasional paroxysms of bearing down of the uterus, with tenesmus and bloody stools, which latter had occasionally the characters of mæna. This distressing train of symptoms was suddenly relieved by the abundant discharge of matter from the uterus, per vaginam, which has continued during the last three weeks, and has not yet altogether ceased. The general symptoms have nearly quite subsided, the countenance is good, pulse 84; the retention of urine has ceased.

March 4th. During the last two days the discharge from the womb has assumed a bloody character, and the retention of urine has returned in a slight degree.

Habeat morphine acet. gr. j; omni nocte.

9th. Since last report, a large quantity of coagulated blood has been discharged from the uterus, which has produced some irritation in the system. The retention of urine has, however, disappeared, as likewise the tumour in the left groin, which had been much increased in size. She continues to take the morphia, and is occasionally obliged to have a double dose, in order to ensure her a night's rest.

11th. Her health has gradually improved since the escape of coagulated blood, and her feelings are, she says, much improved.

14th. Masses of coagulated blood are still occasionally discharged, but she continues much better with respect to her general health.

21st. The discharge of coagula has considerably increased, and there is at the same time increased tenderness and pain in the groin, leading to the idea of matter again forming in that situation. There is not any

tenesmus, but she is again troubled with bearing down uterine pains; there is also painful and difficult micturition, not, however, to the extent of requiring catheterism. She has at the present time a slight attack of cynanche tonsillaris.

26th. Tumefaction has again appeared in the left iliac region, and there is redness, with increased pain and tenderness. The inflammatory symptoms have, however, been diminished by the application of sixteen leeches to the region affected.

28th. Large quantities of coagula are still passed, and Mr. Snowdon, the house-surgeon, reports, that whilst they were formerly almost black in colour, they have now become nearly red. There is still great tumefaction in the left groin, and she likewise suffers from severe pain. She continues to take the morphia.

April 2nd. The coagula are still discharged, and in other respects she continues much the same.

8th. There has been no discharge during the last two or three days; but since its cessation she has complained of rather severe pain in the loins. Fifteen leeches were applied to the groin yesterday, since which she has been better.

14th. Her general health is much better, but considerable discharge is again present. This has been somewhat increased to day by her preparing to leave the hospital, which Mr. White has recommended her to do, for the sake of change of air, which he thinks may be of advantage to her. She is to be admitted again at once, in case of her becoming worse.

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ALLEGED MALPRACTICE IN OBSTETRICY AT DUBLIN.

WE have received a pamphlet published by Fannin and Co., of Dublin, containing an account of an inquest upon the body of an exhumed infant which was delivered by craniotomy. It has seldom fallen to our lot to record a more unjust or a more unprofessional course than that which gave rise to an unnecessary and a most disgraceful inquiry—disgraceful if a member of the profession have got it up.

The coroner it appears is an apothecary, a Mr. M'Carthy. His brother-in-law of the same craft, according to the report before us, which may for ought we know be incorrect, had hatched this proceeding.

It appears that Mr. Hayden, a lecturer on midwifery and surgeon to an obstetric institution, was compelled to perform craniotomy to save a woman's life, and succeeded under most unfavourable circumstances. It also appears that he had previously determined to employ the ergot of rye, and said to the patient's husband, that as he had found it frequently fail, when procured indiscriminately, he would advise him not to purchase it from his apothecary,

but obtain it from one of the hospitals as there it could be depended upon, though that from the apothecary might, but he was *certain* of the efficacy of the latter and would prefer it. The medicine was procured and given, and it excited uterine action, which did not however advance the labour. The woman had always had tedious labours during each of her four preceding confinements, and was four days ill in labour, when Mr. Hayden was called to see her. The labour had ceased and the woman began to sink. The husband was informed of the necessity of craniotomy, and at last consented to it. The operation was performed, and the woman's life was saved.

Our readers will exclaim, What necessity was there for an inquest in a case of such frequent occurrence? The reply must be inferred from the following:—

It appears, according to the statements in the report, that the husband answered emphatically, that it was not his wish, and added "I suppose Mr. Buckley, the brother-in-law of Mr. M'Carthy, the coroner, and also apothecary, could explain." This Mr. Buckley was the apothecary of the husband, and it was his ergot of rye which Mr. Hayden declined to use. Mr. H. also proved that 34,000 patients had been relieved during the last six years at the Anglesey Lying-in-Hospital, to which he is obstetrician, and that the profits of a medical establishment auxiliary to the institution were the cause of the "invidious and diabolical inquiry now before the jury." He also quoted several obstetric works in support of his practice, and called two experienced practitioners, who declared they would have acted as he had done.

*"Verdict of twenty-three Jurors.—*We find, that the child, in relation to which our inquiry has been held, was in all probability dead before the operation was performed by Surgeon Hayden; and we further find, that even if the fact were otherwise, then, that the operation performed by Surgeon Hayden was both well-judged and well-executed, and the result of which has been the saving of the life of the mother; which would, as it appeared on evidence, have been sacrificed by the delay or omission of such operation—and we feel it our bounden duty to give expression to these sentiments, lest any, the slightest, imputation might be thoughtlessly attached to Surgeon Hayden."

Before we comment upon the preceding facts, we must inform our British readers, that Irish apothecaries in general, are mere compounders of drugs, who until within the last six or ten years never attended lectures on medicine, anatomy, surgery, midwifery, &c. and are perfectly innocent of a proper knowledge of either the science or correct practice of the healing art. The junior ones are well educated, in some measure similar to the general practitioners of

England. To which class Mr. M'Carthy or Mr. Buckley belong, we know not; but if the report of the inquest before us be correct, we should be disposed to refer them to the genus of the old school. We draw this inference, because no man who has studied obstetrics, and is acquainted with its principles and records, could by possibility advise a coroner's inquest in the case that gave rise to these strictures, more especially after an educated midwife who possesses a diploma, a lecturer and obstetrician to a large lying-in charity, and two other experienced practitioners, had agreed as to the necessity of the operation. Did these men intend to shew the operation was unnecessary? or prove that they or either of them could by any other means have saved the mother, or preserved the child? No.—But they or one of them or neither of them, but some malicious or evil-disposed person imagined, that by instituting such an inquiry, public clamour would be raised, and an able, scientific, and experienced obstetrician ruined by the proceeding. The respectable jury, however, frustrated such base intention, and a crowded auditory scouted it. "A simultaneous groaning and hissing arose from about 150 individuals, which caused the suspension of the examination for some minutes" p. 10.

What in the name of professional dignity was the cause of this inquest? Was it the loss of the sale of a pennyworth of ergot of rye? Was it to satisfy public justice? Was it the profound ignorance as midwifery practitioners, of those who would disgrace the science of modern obstetrics, if they pretended to practise it, or if they belonged to the class of surgeon-apothecaries, or to the profession, which, we think impossible? or what in the name of humanity and common sense gave rise to this coroner's inquiry? If midwifery practitioners gave it origin, we boldly tell them they are grossly ignorant of a scientific knowledge of that art, and would add, woe betide their patients in similar cases. The fact is almost universally known to educated practitioners, that the operation performed by Mr. Hayden is recommended and practised in similar cases by all the distinguished obstetric physicians and surgeons of the present age. It is also important to add, that Mr. H. was justified in giving the ergot to excite the uterus, for all pains had ceased, so as to be assisted by its action after opening the head. This point of practice is not so clearly stated in the report as it ought to have been, but the midwife proved that the pains had ceased before the medicine was administered, and that the woman was sinking. "Mr. Hayden directed the ergot of rye in order that all means should get a fair trial, and as instrumental delivery was indispensable, the renewed action would assist in the delivery of the child, the head being lessened in the first trial by the compression of the forceps, and in the dernier resort by the evacuation

of the brain of the foetus." p. 13. The exact presentation of the head is not however stated, except in a loose indefinite manner by the midwife: "The head was at the upper opening of the pelvis; opening the head in order to diminish its size, by the evacuation of the brain, was indispensably necessary, as the head was too large to pass without this operation; the forceps had been tried, delirium had set in, the pulse became exceedingly quick, abdomen tender on the slightest pressure, pelvis deformed, the patient was now exhausted," &c. p. 12. This assuredly was a proper case for craniotomy.

A word to the medical coroner. He quoted some antiquated law Latin, at which the young medical jibs of old Trinity raised a hearty laugh—we suppose something after this fashion, "*primus strokus sine focus, absolutus est provokus*," against counsel cross-examining the witnesses. "He objected in the strongest terms to the examination of witnesses by counsel, and said he remembered a great many authorities, but could not think of them just now."

Mr. McDonough declared he would not forego the rights of his profession. He reminded the learned coroner of the Rathcormac inquest, as a recent instance in which counsel were employed on both sides.

Mr. McCarthy, the medical coroner, having still persisted in his attempt to silence counsel, the senior coroner arose and stated, that if Mr. McDonough were not heard, he would appoint him as his assessor, and in that capacity he should be heard."

Mr. McDonough would act in his professional capacity only, and Mr. McCarthy in the most complimentary language declared, "he felt a personal respect for Mr. McDonough, but he was unwilling to set the precedent." p. 8. It is clear that the schoolmaster has not yet visited the learned gentleman, and that he is a century behind the progress of medical reform.

We shall not offer a remark on his official conduct further than this, that it would, in our opinion, have been better taste and more in accordance with the conduct of judges and respectable magistrates, not to preside at trials in which themselves or their near relatives are concerned. It is true a magistrate, is too often judge and jury in his own case in Ireland, and the worthy coroner could no doubt cite many precedents. We cannot agree with a contemporary that the unfortunate display on this occasion invalidates the opinion of those who advocate the expediency of appointing well informed medical men as coroners. Were an intelligent medical coroner the judge in this case, one who was well acquainted with obstetrics, no inquest would have taken place, for he would know that such was unnecessary.

In conclusion, we add that we do not know one of the parties who were engaged

in this inquest. We do not wish to hurt the feelings or to injure in the slightest degree the professional reputation, legal or medical, of any one of them; but we exercise our right as public journalists, to criticise, fairly and impartially, a point of medical practice which has long and seriously occupied the attention of our profession, and is of deep interest to the welfare of society. If unnecessary inquiries, like this inquest, were to become general, and experienced practitioners were to be dragged before the bar of the public for saving human life by formidable operations, we feel convinced that humanity must suffer much more than superficial and non-professional persons might imagine.

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Porriago Favosa.

Our French contemporaries are now employing the various preparations of iodine in cutaneous complaints. M. Bielt uses an ointment composed of ioduret of sulphur, gr. xxiv—xxxvi, and lard, ʒj.

M. Dauvergne employs the following lotions. Iodine, ʒij; ioduret of potass, ʒvi; distilled water, ʒij.

A drachm of this is mixed with half an ounce of the following, and then added to a basin of tepid water.

Sulphuret of potass, ʒiv; distilled water, Oaa.

—

Lepa Vulgaris.

We have lately cured a young woman of lepra vulgaris, of five years' standing, which covered the whole cutaneous surface, and defied a variety of remedies, with the following ointment. Her general health was duly attended to.

Rx. Hydriodate of potass, ʒiss;
Prepared lard, ʒiss;
Tincture of opium, ʒj.

Several pupils have witnessed the treatment at the Western Dispensary. M. Gibert found the following successful at the Hôpital St. Louis. Ioduret of ammonia, ʒi—ʒj; adipis, ʒj—daily for twenty-nine days.

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Chloride of Lime in Itch.

Dr. Hospital uses the following ointment with success.

Rx. Lac. Sulphur, ʒiss;
Pulv. chlor. calcis, ʒij;
Adipis, ʒvj.

Double this quantity effects a cure.

LUNATIC ASYLUM.

THE new building at Hanwell, though holding 500 patients, is already full.

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HORTICULTURAL SOCIETY.

THE Society rooms in Regent-street, were highly ornamented on Tuesday, by contributions from the fellows—these were unique specimens of several rare plants.

Dr. Lindley resumed the reading of a paper by Mr. M'Gregor Drummond, on the cultivation of French pears in Scotland. Some of the observations on the uses of pond and spring water were exceedingly interesting.

EXECUTION OF MARY ANN BURDOCK.

THIS unfortunate woman was executed at Bristol, for the poisoning of Mrs. Smith with yellow arsenic. The facts of the case were reported in a former number. The execution of this culprit was the consequence of medical evidence. Alas! poor Gordon Smith, founder of medical jurisprudence in England; we remember when you and ourselves were the only lecturers on this branch of science in London.

EGYPTIAN MEDICINE.

WE understand that an epidemic epiphora is at present raging among the crocodiles throughout Egypt. This extensive lachrymation is supposed to be occasioned by the sympathy of the reptiles for the green lizard on which we lately inflicted so frightful a laceration.

THE contest for the vacancy in the Academy of Sciences, by the death of M. Dupuytren, has terminated in the election of M. Breschet. The numbers of votes for the several candidates were as follows:—M. Breschet, 41; Civiale, 7; Velpeau, 4; Lisfranc, 3,

Ointment for Scrofulous Inflammation of the Eyes, Psoric Disorders, &c.

Sub-borate of soda..... 15 parts.
Fresh butter 145 ...
Journ. des Sc. Phys. et Chim.

Water for the Preservation of Dead Subjects.

Common salt and alum, of each.. 33 ounces.
Saltpetre 15½ ..
Water 6 gallons.

Cure for Jaundice.

FREZE LE OME used to cure jaundice by giving a drachm of dried and powdered walnut-tree leaves, infused in a glass of white wine, taken every morning fasting; from fifteen to twenty doses were for the most part sufficient to annihilate the disorder.

BOOKS.

The Medico-Chirurgical Review, and Journal of Practical Medicine. Edited by James Johnson, M.D. Physician Extraordinary to the King, and Henry James Johnson, Esq., late House Surgeon to St. George's and the Lock Hospitals. No. 44, April.

The Medical Quarterly Review, No. 7, April.

The American Journal of the Medical Sciences, Nos. 29, November, 1834, and 30, February, 1835.

The Pathology and Diagnosis of Diseases of the Chest, illustrated especially by a rational exposition of the physical signs, with the new researches on the sounds of the Heart. By Charles J. B. Williams, M. D. &c. Third edition, 8vo., pp. 209. London: J. Churchill. 1835.

The Sphygmometer, an instrument which renders the action of the arteries apparent to the Eye, from the French of M. Hérisson, translated by Dr. G. S. Blundell, 8vo., pp. 46, 1 plate. London: Longman and Co. 1835

A Few Practical Observations on the Art of Cupping. By Joseph Staples, Cupper to St. George's and St. John's Hospitals. 12mo. plates. Longman and Co.

A useful manual for students and junior practitioners.

CORRESPONDENTS.

Hibernicus—Erinensis is one of the most powerful writers of this age, and is not to be provoked. If knights errant choose to attack him, they must bear the results. There are some of the profession in Dublin who think themselves superhumanly renowned, but Erinensis has taught, and so have we, that those residing in glass-houses should not be the first to throw stones. The head and front of our offending was, that we exposed their delinquencies before Parliament, and would again to-morrow, if called upon. Nevertheless, there is a just proportion of able and clever professional men in Ireland as well as in all other civilized countries.

A Reformer—Fudge; the editor of the *Lancet* is not to be caught with common, though he might with attic salt. The leather-headedness of the article is too palpable. A rejoinder would be an honour and an essential service.

Fair-Play—The trick has been practised to a great extent. But medical men are not gullible. The poverty of the land is too visible.

We have received a letter in reply to our correspondent J. F. C.; but the signature to it is perfectly hieroglyphic. The purport of it is against the writer, and not against his reasoning.

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SATURDAY, MAY 2, 1835.

VOL. VII.

LECTURES
ON
MEDICAL JURISPRUDENCE,

DELIVERED BY PROFESSOR A.T. THOMSON,

F. L. S.,

At the University of London; Session 1834-35.

LECTURE XXVI.

GENTLEMEN,—Without entering into the consideration of the question respecting the nature of the changes which are effected in the lungs during respiration, either as regards the blood or the inspired air, it is evident that this function cannot be suspended, for many minutes, without life ceasing. The energies of the brain and nervous system depend, in a great measure, on the properties of the blood resulting from pulmonary circulation. If blood, of the description which circulates in the veins, be conveyed to the brain, an instant and powerful sedative impression is produced on the energy of that organ, and asphyxia or death ensues. That this actually depends on the nature of the blood, was undeniably demonstrated by the experiments of Bichat, who injected both arterial and venous blood from one animal into the carotids of another. The transfusion of the venous blood caused death, almost as soon as it reached the brain; whereas no effect was produced by the transfusion of arterial blood; unless when it was employed to a dog in a state of asphyxia, in which case the animal recovered. These experiments, and many others which might be detailed, are sufficient to demonstrate the intimate connexion between the functions of the brain and those of the respiratory organs.

Now the inference to be drawn from the facts which I have just mentioned is this:—that in every instance of suspended respiration, by whatever means effected, the asphyxia which follows is the consequence of the impression of dark, venous, or unaltered blood upon the brain. As far as the heart is concerned, we shall find that it is little influenced in itself by such a state of the blood; the left ventricle continues to contract and circulate the blood for some time after the function of respiration

ceases, and this continues until the influence of the destroyed energy of the brain is felt on the rest of the system. This fact is further beautifully illustrated by experimenting on animals which admit a suspension of one part of the respiratory function, whilst the function of the other part is entire. Thus in caterpillars, who breathe by stigmata, if you close with oil the stigmata of one side, hemiplegia is induced; if one half of the stigmata in both sides, paraplegia follows; and if all the stigmata, the animal dies.

When respiration is suddenly impeded, so as to produce sudden death, the animal is said to be suffocated; in whatever manner this is accomplished, whether by closing the inlets to the entrance of the atmospherical air into the lungs, as in *smothering*, *hanging*, *drowning*, or *immersing* the body in *carbonic acid*, and some other *unrespirable gases*; or by the *inhalation of noxious gases*. Any of these circumstances occurring, whether accidentally or intentionally, as an act of suicide or murder, become subject of medico-legal investigation, and consequently demand our attention.

In treating of infanticide, I mentioned that children are not unfrequently smothered under bed-clothes, and by other means; and I pointed out the method of detecting this as far as an opinion can be deduced from the examination of the lungs by the hydrostatic test, and the absence of any other probable cause to which the death of the infant can be attributed. The history of crimes for the last few years has proved, that this mode of destroying life is not confined to the state of infancy. The art to which the infamous Burke has given a name, perpetrates murder in this manner. The mouth and nostrils are held firmly closed, whilst the thorax is compressed by a person sitting or kneeling upon the chest: or a pillow or other substances may be firmly compressed on the face, whilst the person is held down, and prevented from struggling by a person sitting on the thorax. Smothering has, also, occasionally occurred from accident, when a person in a state of intoxication falls in such a manner, or in such a place, that the entrance of the air into the lungs is prevented; and from the

neck by suicides, and the double mark thus produced. These circumstances, therefore, as well as the time elapsed from the hour of death, if known, should always be taken into account, in deciding whether an act of suicide or of murder has been committed. If no previous strangulation appears to have taken place, a most decisive evidence is the state of the lungs; for, if the body has been hung up after death, the appearances which I have described, as characteristic of death by suffocation, do not present themselves. With regard to the second question, Whether the person has hung himself, or been hung by others? The absence of the appearances of any struggle indicate that hanging has been an act of suicide; as it is very unlikely that any one would submit to be hanged against his will, if not legally condemned to be so as a punishment for crime, without making great resistance. The importance of attending to these circumstances, is well illustrated in a case quoted by Fœderé from the "*Causes Célèbres*," and translated by Dr. Beck.—See his work, p. 284.

But, although the appearances noted in this case indicate suicide, yet you must also recollect, that bruises and wounds on the body do not always bear testimony of force having been employed. A person may swing himself with violence, with the view of speedily destroying himself, and may thus be wounded.* An apprentice boy, working alone in an attic, tied one end of a rope loosely round his neck, probably without any intention of destroying himself, and twisted the other round the projecting top of a door, the planks of which were irregular, and somewhat apart; a small stool on which he stood slipped from under him, and when he fell forwards, he struck his temple against the corner of a box, which cut him to the bone; he lay along the floor, his head and shoulders only elevated a few inches above it; and in this state he perished. The master of the boy, who was from home when the accident happened, was accused of having first murdered, and afterwards suspended the boy. But, from the appearances on dissection, the turgid vessels of the brain, the broken thyroid cartilage, the blue nails, and the clenched hands, in confirmation of important circumstantial evidence, exonerated the master, who was properly acquitted of all blame by the Coroner's Jury.

But suicides have been known to inflict wounds upon themselves, and afterwards destroy life by hanging. De Haen mentions the case of a young clergyman, who first partially cut his throat, and then hung himself in the vestments of his office, which he had arranged for that purpose. In this case, without circumstantial evidence, it would have been impossible to divest oneself of the idea that murder had taken place.

A very interesting case is related by

Fœderé, and quoted by Dr. Beck, to show the necessity of the utmost caution in examining cases in which there is any difficulty in determining whether murder or suicide has been committed.—See case in Beck, p. 283.

In those who hang themselves, from the clumsy mode in which the work is accomplished, the appearances in the lungs differ from those found in the lungs of those hanged by others. From the pressure of a badly-adjusted rope, the cheeks, lips, eyes, and tongue, are generally also more swollen; and, as the death is more protracted, in consequence of the ligature not wholly intercepting the transit of air, the lungs are less gorged with blood, and contain much less gaseous matter. There is also more apoplectic appearances in the brain, from the death being less rapid. In those properly hanged, Dr. Godwyn found two hundred and fifty cubic inches of air in the lungs. Now this quantity is never found in cases of hanging by suicide. In the state of the lungs in natural death, the average quantity is one hundred and nine cubic inches.

When any doubt exists, every minute circumstance relative to the state of the body when found should be noted down—the surrounding objects and their state, both in relation to their usual appearance and to the body—the manner in which the rope is fixed—and every fact, however minute, should be recorded. The necessity of recording the position of articles near the body is well demonstrated by a case recorded by Dr. Gordon Smith, which happened in Northamptonshire, in 1831:—"A girl, thirteen years of age, was swinging in a cow-house, and near the swing hung a rope with a noose in it, for the purpose of drawing up slaughtered sheep. As she swung backwards, her head got through the noose of this cord; she was dragged out of the swing, and was thus actually hanged." The position of the body is often remarkable. In some cases of suicide, the rope, or handkerchief, is so long, that the feet might rest on the floor; and the knees are therefore either bent under the body, or the limbs are thrown forward, so that they rest on the heels, and leave the whole weight of the body on the rope. The Prince de Condé, who hung himself in August, 1830, was found suspended from a window-shutter, with his feet touching the ground, and his knees bent; and a prisoner who was found hanging to the bars of a window, in one of the Continental prisons, was in a sitting position, and with his hands tied together: yet there was no doubt of the suicide.—*Annales de Hyg. pub. et de Med. Let. t. v. p. 156.* As the medical practitioner is generally the first person called in on such occasions, all these particulars should be noted by him. In doing this, if the body should be found in a brothel, although suspicion may be strongly excited, yet he must not permit himself to be influenced by it, in

* Dr. Male relates a case in point.

examining into the causes of the death. It is a fact, not very honourable to human nature, that persons have permitted themselves to be hung, for a few minutes, as a mode of exciting the venereal appetite, and, if the courtesan be drunk, or stupid, she might unintentionally exceed the time, and fatal asphyxia thus follow. In examination of the body of a sailor who was found hanging to the top of a bedstead, in a house of ill-fame in East Smithfield, it was proved, on trial, that his hands were tied behind his back; a handkerchief drawn over his eyes; and that this was fastened by what is termed a sailor's knot. It was therefore evident that he could not have hung himself, but a sailor was concerned in the murder: this man, the keeper of the brothel, and a woman of the name of Hughes, were tried for it, found guilty, and executed.

3. With respect to the last question—Whether a body found not hanging was killed by hanging? As it is possible that few external signs may be present, it is important, in making a dissection, that we draw a proper distinction between the effects of *hanging*, and those of *apoplexy*, *smothering*, *drowning*, and *carbonic acid*. The distinction, in the first case, depends on the state of the brain. In *apoplexy*, the extravasation of blood into its substance or cavities, or its effusion between the membranes, or the effusion of serous fluid not corresponding with the condition of the lungs, their gorged state, the gestion of blood in the right side of the heart, and their not collapsing when the chest is opened, afford strong suspicion that that disease, not suffocation by hanging, has been the cause of death. In *smothering*, the same state of the lungs that occurs from hanging, presents itself on opening the body; and, if the struggle to escape have been great, the vessels of the head will not only be found full, and the sinews distended with blood, but a section of the brain will exhibit an unusual number of red points; and, occasionally, effusion of serum is found in the ventricles, and on the base of the brain. Thence, in such a case, if no external mark of the rope appear, the difficulty of distinguishing between smothering and hanging is very great.

When no struggle has taken place, all the vessels of the brain remain in a natural state, and no difficulty presents itself. In a case of *Burking*, which as I have stated is a modification of smothering, the pressure on the thorax, by forcing nearly the whole of the air out of the chest, the circulation is so quickly arrested, that no time is afforded for accumulation of blood in the venous system; the body in this case presents no discolouration of the skin, unless on the face, around the mouth, nor yet always engorgement of the pulmonary vessels; there is no difficulty, therefore, of forming a diagnosis in this case. In *drowning*, as I shall afterwards describe to you, the state of the brain is perfectly different

from that produced by hanging; the face is pale, and much frothy mucus is found in the trachea, bronchia and air-cells of the lungs, and also some water, which is never found in bodies of those who have been hanged alive. In cases of fatal asphyxia from *carbonic acid*, there is gorging of the cerebral vessels, and those of the lungs, which also appear as if emphysematous, and other appearances which render the diagnosis difficult, if no mark of a rope remains, or if the body be examined too soon after death. In many instances, however, of poisoning by carbonic acid, no rigidity of the body takes place: but except for the mark of the ligature, some distortion of features, which always accompanies hanging, the bent fingers and the clenched hands, the diagnosis in this case, is always doubtful, and ought to be delivered with caution. It is altogether more akin to apoplexy than to hanging. In inquiring, also, into the cause of bodies supposed to have been hung, we must recollect that a person may be suffocated by any hard substance getting into the gullet, and sticking there so as to cause suffocation; and ignorant persons may grasp the throat so as to attempt to push it down.

Substances may also be impacted in the glottis, as was the case with the celebrated poet Anacreon, who lost his life from a grape-stone lodging there when he was quaffing some new wine. Care must therefore be taken to leave no part of the air tubes or their entrances unexamined.

The most prominent diagnostic signs, and those to be depended upon, are,

1. The mark of the cord, seen either at first, or appearing after a few hours have elapsed.

2. The distortion of features, and the contraction of the muscles which raise the shoulders.

3. The fingers bent, the nails blue, and the hands firmly clenched.

4. The erectile state of the penis, with the emission of semen, and the expulsion of urine and fæces.

The absence, however, of this sign, is no proof against the conclusion, that hanging has been the cause of death: for although in every instance erection takes place in the act of hanging, yet, an hour or two afterwards, this state has disappeared, or a semi-erection only exists.

. See some remarks by M. Guyen, Anderson's Med. Quar. Jour. vol. i. p. 151.

5. The corresponding appearances in the brain and lungs, perceived on dissection.

Strangulation, another cause of sudden death, is a modification of hanging. In both, the cause of the fatal issue is external pressure on the trachea, so great as to prevent the passage of the air into and from the lungs: but, as in strangulation, in the ordinary acceptation of the word, there is no suspension of the body, it differs from hanging in several particulars.

Much, in these cases, depends on the man-

ner in which the strangulation is performed, and the degree of resistance made by the sufferer. If a ligature or rope, or handkerchief, have been employed, or the bowstring, as in Turkey, the mark left is generally lower, and more horizontal, than that which is produced in hanging; but, if the fingers be the means used to compress the trachea, the evidence is more decisive, because the death is likely to be more protracted, and the extent of the violence more obvious and diffused. It is scarcely possible to suppose, that one man can strangle another with his hands, unless he throw his victim upon the ground, and press also upon his chest; in which case, besides the bruises and coagulated blood in them on the neck, the lungs are found almost empty; a state, the opposite of that which occurs in hanging.

The body of General Pichegru, whom I knew well, and who was strangled in prison in Paris, it was supposed by the order of Buonaparte, who was then First Consul, was found lying in bed, on the left side, in an easy attitude, the knees bent, and the arms lying naturally by the side; a black silk handkerchief was twisted round the neck by means of a stick passed under it, and which had torn the cheek in its rotation. Remer, who thus describes the case, doubts whether it was murder: "*J'accorde que ce genre de mort n'est que tres rarement le resultat, d'un suicide, mais je doute que sur cette suite consideration, et sans autres preuvers plus fortes, au puisse absolument affirmer qu'il y a en meurtre.*"—*Ann. de Hyg. Ad. Med.* let. iv. p. 186.

With respect to the question, whether the marks seen, as if of a ligature, were produced during the life of the individual? This question must be tried by the same tests as in cases of supposed hanging. If there be fractures of the vertebræ of the neck, but no dislocations, there is reason for supposing that the death was effected by strangulation, rather than by hanging: nevertheless, this admits of a fallacy, as occurred in the case of Sir Edmund Godfrey, who was murdered on the 12th of October, 1677, by strangulation. A handkerchief was twisted round his neck; but on the supposition of one of the murderers, that the purpose was not effectually accomplished, the neck was violently twisted round, and dislocation produced.

Sometimes, when the hands are employed, one small bruised spot only is perceptible on the neck. Metzger mentions an instance of this kind. A young officer was strangled in bed by a soldier. The surgeon of the regiment, who examined the body, could find one small spot only; which was explained by the confession of the murderer, that he had killed his victim by violent pressure with his thumb on the trachea.

With regard to the question, can strangulation be an act of suicide? I should, *a priori*, reply, this is impossible, as the asphyxia, which implies strangulation, must deprive the

man who attempts it of all control over his muscular energies; and, consequently, the act could never be completed. Yet cases are recorded which appear opposed to this opinion. Dr. Desgranges, of Lyons, relates a case of a man found in a hay-loft, who had strangled himself, by means of a handkerchief, tightened by a stick: and Dr. Dunlop, relates another of a surgeon of the navy, on board a ship of war in India, who tied a handkerchief round his neck, and with a small stick twisted it several times; then secured it behind, to prevent it untwisting; and by this means succeeded in destroying himself. But although these instances demonstrate the possibility of suicide by self-destruction, yet such cases are extremely rare.

It is sometimes of vital importance to the cause of justice, to ascertain the time when death, from asphyxia, by whatever means induced, takes place. In strangulation, if no direct evidence can be brought forward on this point, it should be remembered, that if the body be cold and stiff, we may be certain that more than twelve hours have elapsed since the fatal event; for in strangulation, the heat of the body, and its pliability, continues for that period of time. If the time has been so long that putrefaction has taken place, then we can only draw our proofs from the extent of its progress, in conjunction with the collateral circumstances tending to forward or retard this event: as, for instance, the degree of dryness or moisture of the place where the body is found; its exposure to stagnant or moving air; the elevation of the spot; the nature of the erections in the neighbourhood, whether lime-kilns, steam-engines, &c.; and the probability of terrestrial exhalations that may effect animal decomposition.

M. VIREY'S CODE OF UNIVERSAL GENERATION.

(Continued.)

Animals do not copulate but when impelled by desire at the rutting season, and hence their unions are almost always fecund. It is not so with the human species, who too often abuse the faculty they possess of engendering at all times. From this it happens that the human sperm is badly elaborated—is not always fecund; and the uterus of the woman too often stimulated by frequent approaches, opens itself and recommences without ceasing the work of Penelope; and thus most courtezans, who abandon themselves to vague and indifferent unions, rarely become pregnant. They only engender with those for whom they entertain a peculiarly strong predilection. For the same reason prostitutes seldom conceive, until they are reclaimed, and confine themselves to one individual whom they prefer. It is to obviate the escape of the sperm that cold water is poured over

mares, heifers, &c. after copulation, for the purpose of contracting and closing the womb. The Arabians exercise their mares by hunting before the access of the male, because they, being fatigued, lay down, and their repose is supposed to facilitate impregnation.

For the same reason, it is advantageous to a woman to repose quietly in bed after coition, more especially when she is relaxed by leucorrhœa. In this last disease the retentive power of the vagina and uterus is diminished or destroyed, the male sperm will be too much diluted and rendered incapable of fecundation, and will often escape when the erect position is assumed. It is generally supposed, that impregnation is more readily effected a day or two after menstruation, as the uterus is open; but previous to menstruation this organ is congested and engaged in the performance of a function preparatory to, but different from, fecundation.

Animals confine their amours to their own species. Love is diminished in proportion as the species are more distinct from each other; there is great disproportion between their sexual organs, and copulation is, in most cases, impracticable. Mules cannot be engendered unless among species somewhat similar, and they are generally sterile. Those of birds are sometimes fecund, but mules in general are sterile, or they engender through successive generation until their offspring resembles the original parents, male or female, as the influence of the one or the other predominates. Moreover, the periods of uterine gestation are different among animals, which is an effectual bar to indiscriminate copulation. Neither can a human hermaphrodite engender in itself; nor was there ever such a being, as it would be the object of love, and possess the means of gratification, life would be continually injured and exposed to perpetual amorous transports, and the being should speedily die.

Conception is sometimes announced in women by tremblings and voluptuous horripilations. In women and quadrupeds the male seed is sometimes rejected, and conception does not happen, either when the female is indifferent to amorous impulse, or that the womb is in a state of insensibility or atony. The latter conditions are removable by the mulating aliments, or by particular excitations. Woman and the mare are said to be the only animals that receive the male after conception, almost the rest refuse him; and, like the daughter of Augustus, do not admit any more passengers when the ship has its cargo. Nevertheless, several other females are subject to superfœtation, as those of rabbits, hares, &c. &c.; which proves that these animals do not always refuse the male during gestation. It is true that one copulation impregnates several eggs: but it is

still more marvellous that one female insect—one fecundated by the male—produces eggs capable of engendering, without any further intervention of the male. The second generation produces another, independently of the males; so that the species is perpetuated for some time by the female only. This effect of the fecundating seed of the male is transmitted for nine successive generations, which are all composed of females, except the last, which contains males: then there is another copulation, which serves for nine other generations. Reaumer and Bonnet have attested this fact by multiplied examples, as will be found in their works; and Spallanzani declares that he observed analogous facts in the *helix vivipara*. The eggs of insects impregnated by the male withstand the winter, as they possess more vitality than others which are not. The fecundating power of the male passes from generation to generation, until its exhaustion. Thus the insect can be a mother and a virgin at the same time. The same fact was observed by Jurine in certain water insects (*monoculus apus* Lin.), of which there are fifteen generations of these without copulation. Audebert also assures us that a spider is fecundated for two years by one copulation; so that the fecundating influence of the male is considerable in most animals. It is not at all so with vegetables: but it is extraordinary to see a plant of one sex, as the *juniperus candensis* L., to be one year male and another female: at one time the fecundator, at another fecundated. Thus the insect is father and mother at once, and may be one or the other.

We also know that a woman has brought forth a black and a white infant at one birth; there are, therefore, superfœtations, and these are not rare among quadrupeds. Moles are false conceptions, but do not exist without the male seed, whatever indulgent practitioners may say to the contrary. Animals and plants which reproduce from prolongations or sprouts, such as were already mentioned, have no need of fecundation; they have within them all the principles of life sufficient for the propagation and conservation of the species. The male roots of dioic plants cannot multiply from twigs; whilst the female increase with facility; and this proves that the female participates more than the male in the propagation of the species; that she is truly the essential shoot, and that the male is but an auxiliary, or an excitator. All the gemmiferous may be considered similar, and are sufficient in themselves.

The duration of gestation varies very much according to species. The ordinary period of pregnancy with women is forty weeks, or nine calendar months; but it appears to be longer for female than male infants. At the fourth month the infant

stirs and quickens. During the commencement of pregnancy, abortions are more common than towards the end; and, in general, women and domestic animals are more predisposed to this danger than the other species, either on account of menstruation, or on account of the abundance of their nourishment, which renders their sexual organs susceptible of excretions and hæmorrhages, and especially in the former at the period of menstruation. Copulation very much increases this disposition to abortion; and delicate, nervous women, of an ardent disposition, or of a plethoric constitution, are particularly liable to this frequent and dangerous disease. It is important to state, that abortion may become a habit, and it is only sufficient to have aborted once or twice to be liable to it for seven or eight times, and often for the remainder of life.*

Parturition is a safe and simple function, except in civilised countries, where nature punishes the violation of her dictates in the act of maternity.

We observe great difference in the various individuals of animals and plants, relative to the generative function. Some are fecund; others are sterile; malformation of the genital organs, which prevents coition, or the secretion or ejaculation of sperm, are frequent causes. Sterility may depend on a weak or diseased state of the sperm, as after severe disease, ill-cured syphilis, &c. But sterility is more common to women, either on account of not retaining the male fluid, or when the genitals are impervious, or when the temperament is too humid or too dry; too excitable or too inert; or of extreme fulness of habit, or of extreme thinness. In fine, sterility often depends on disgust, repugnance of individuals, or a state of languor or disease, a defect of love, insalubrity of habitation, influence of the passions, excessive exertion of mind or body, fatigue, exhaustion, effeminacy, libertinage, masturbation, delicacy of constitution, too vivid a sensibility, apathy, and, in fact, a thousand other causes. Animals and plants that follow the laws of nature, much better than the human species, are very rarely sterile. Extreme youth and old age are also causes of infecundity. Individuals who are too fat, whether male or female, are often sterile; and this is the case with most of the inferior animals.

* There is much more hæmorrhage in abortion than in natural labour. If this be profuse, it impairs the general health, develops consumption, disease of the liver, or any other organ predisposed, and, in some extreme cases, destroys life. I have known a young lady of good stature, florid complexion, and great beauty, who had five abortions during the first fifteen months after marriage, at which time she died of consumption. Women, in general, suppose that a miscarriage is unworthy of notice, though many lose their health and life by it. In some cases, transfusion alone can save them.—Ed.

During the season of love all animals are thin, and do not become fat, except in the time of repose, as in autumn.

It is a hopeless attempt to pretend to explain the mystery of generation in all beings. The power of the human mind is as fragile as ice, when compared to the impenetrable veil with which nature has enveloped it. The efforts of thirty ages of researches have been unsuccessful. Most men, it is true, have only considered this problem as respects the human species and some animals; but it is evident that the generation of plants and polypi, of the oviparous and viviparous, of all that enjoy life, belonging essentially to the same principle, because nature is always conformable to herself in her works, and no one can admit several causes for the same effect. It is therefore necessary to have recourse to some general principle.

All the theories hitherto offered are unsatisfactory. We know not in what manner life begins or ceases.

There is but one primitive generation.

Love, generation, and life, are the same thing. Of these very fully hereafter.

LECTURES

ON THE

PHYSICAL EDUCATION AND DISEASES OF INFANTS, FROM BIRTH TO PUBERTY,

BY DR. RYAN,

Delivered at the Medical School, Westminster Dispensary, Gerrard-street, Soho;

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LECTURE XXXIV.

Displacements, Irregularities, Transpositions, and Protrusions of Soft Parts.—Transpositions of the Thoracic and Abdominal Viscera.—Arrest of Descent of the Testis.—Hernia.—Strabismus.—Twinkling of the Eyelids.—Congenital Malformations and Diseases of the Skin.

GENTLEMEN,—Having described the displacements and deformities of the bones, it now remains for me to treat of those of the soft parts, and to conclude this part of our subject with an account of the congenital malformations and diseases of the skin.

Displacements or Irregularities of Soft Parts.

—Displacements of soft parts are most common to internal organs, every one of which has, at one time or other, been found transposed. The transposition of the organs, from one side of the body to the other, is occasionally observed. The heart has been found in the right side of the chest; the liver in the place of the spleen, and vice versa; the stomach, &c. have been displaced; one kidney has been found in the thorax. The causes

of these displacements are unknown. The health of individuals so affected does not suffer, and they may survive to old age.

The testicles may be absent from the scrotum, and in such cases they are enclosed in the abdomen, as in their embryonary state. One may be in the scrotum, and the other in the abdomen. It is important to know, that the presence of one or both in the abdomen is not a cause of sterility. They may develop to the full size in that cavity, (*John Hunter, Sir Astley Cooper, &c. &c.*) and perform their functions as well as in the scrotum. An apprentice of Sir Astley Cooper's shot himself, under the impression that as the testes were not in their usual situations, he was impotent. The celebrated Baronet states, that a piece of paper was found on his table, containing these words, "I am impotent."

A gentleman of fine stature came from a distant country to consult me lately as to the propriety of marrying, as there was but one testis in the scrotum. I told him the other was in the abdomen; and probably was as well developed as the one that descended; but whether it was developed or not, the normal condition of one organ was sufficient to justify his entering into a matrimonial union.

It is also important to know, that the descent of the testicles at the abdominal rings in the groins has been often mistaken for hernia. The empty state of the scrotum would at once indicate the real nature of the case.

When hernia is said to exist in young infants, the scrotum, on the affected side, ought to be examined between the index finger and thumb, so as to ascertain whether the testicle has descended or not. I have repeatedly known practitioners mistake the descent of the testicle, proceed to reduce it, and then apply a truss, or a cork covered with lint over the ring, and secure it with a bandage passed round the loins and between the thighs. This is obviously bad practice, though good in obstinate hernia; but even in this case very seldom necessary.

When the testicles are retained in the groins, Levret advised the rings to be separated with the fingers, which would cause the infant to cry, and the succussion caused by the strong expirations would precipitate the testicles into the scrotum. Warm emollient fomentations or poultices would be preferable to this method, and relax the rings without any accident.

In most cases the testicle descends in a few weeks after birth into the scrotum, though it may remain during life in the abdomen. It should be recollected, that both testicles are in the abdomen during the early period of intra-uterine life; both are supplied with arteries, and these will convey an equal quantity of blood, whether the organs remain in the abdomen, or descend into their usual situation at birth. If a practitioner mistook the arrest of one or both testicles in

the groins for hernia, and pressed on them forcibly to reduce the supposed rupture, or applied a steel truss on the testicle, the result might speedily prove fatal.

I lately attended a case in point with Mr. M'Cann and Mr. Brady, in which it was supposed the infant had hernia before we saw it.

Some children and adults have a power of elevating the testicles to the groins, and the tumors formed by both have been often mistaken for hernia. Mr. Copeland Hutchinson relates the case of a recruit who possessed this power, and exerted it to evade impressment into the navy. Mr. H. observed the scrotum pendulous and empty, and detected the real nature of the case. M. Capuron met with a case of a man aged twenty-five years, whose testicles had not descended into the scrotum. This man had indulged much with women. There may be hernia, numerous hernia.

Hernia.—There may be hernia of the brain (encéphalocèle), as already described, and life protracted to an advanced period (Geoffrey St. Hilaire). These tumours may be present on all parts of the head, as already stated; but are, according to the illustrious author just quoted, most common on the vertex (cystocephale and podencephale), on the occiput (derencephale), or on the back (notencephale).

The viscera of the abdomen have passed through a perforation in the diaphragm into the chest. The stomach and liver have passed in this manner, according to Duges and others; and though such malformations are generally mortal and irremediable, it is essential to be aware of their existence, as it would enable us to form a correct opinion in medico-legal investigations on the viability or non-viability of infants.

Abdominal hernia are of much more frequent occurrence. The umbilicus often allows a portion of bowel to protrude, and this is popularly termed "starting of the navel." It may be congenital, or be induced soon after birth by coughing or crying. It is, in general, easily cured by compression. In scientific language, the disease is termed omphalocele, or umbilical hernia. It occurs when the umbilical ring, or opening, does not close; or when the bandage, which is usually placed round the bowels and body, is carelessly or too loosely applied. This disease is of common occurrence in hospital, dispensary, and private practice. The hernia may exist in the umbilical cord, and be observed when the practitioner is going to apply a ligature on it when about to divide it.

The chief indication of treatment is to reduce the hernia, or push it into the abdomen; and to prevent its protrusion by means of a pledget of lint, secured with straps of soap plaister and a bandage. These simple means are generally sufficient to effect a cure. The infant should not be allowed to cry but as little as possible; and should it suffer from cough, immediate attention to cure this com-

plaint is advisable. In most cases, the navel closes in two or three weeks after birth.

Dessault mentions nine cases of infants, under two years of age, in which, after having reduced the herniæ, he passed a needle with a double ligature through the sac and tied it; and thus effected a cure. It is, however, the general opinion, that such an operation is seldom, if ever, necessary.

Hepartomphalos.—The first description of this kind of hernia with which I am acquainted is that of Rockholtz, entitled, *De Hepartomphaloce congenita*—1768. The disease consists of some part of the liver protruding as a hernia at the navel; and hence the term, derived from the names of both parts. The disease is common to infants born prematurely, or to abortions; but is seldom observed in full-grown infants. Dr. Underwood met with one case only, and the infant survived until the sixth month. I have repeatedly seen monsters, whose abdominal viscera protruded through the whole anterior parietes of the abdomen: and examples may be observed in our large museums. In the cases cited, the anterior walls of the abdomen were defective; and, consequently, a cure could not be expected.

Inguinal Hernia. Bubonocoele.—The inguinal canals often remain open after the descent to the testicles. A portion of bowel or omentum descends, and forms a tumour in the groin. The weight of the intestines pressing against the inguinal canal is the cause of this variety of rupture. The tumour is enlarged when the infant cries, coughs, or laughs, and diminishes when the infant is placed on the back or in the horizontal posture; and it often entirely disappears in this posture with a gurgling noise. It should be distinguished from the tumour formed by the testicle when arrested at the inguinal ring, which is not characterised by the preceding symptoms, and by the absence of one or both testicles in the scrotum or purse that usually contains them. The indication of treatment in inguinal hernia is to reduce the tumour, apply a compress and bandage, or a small truss. The application of cold water twice a day, in the manner recommended in the cure of hydrocele, is also conducive to the removal of the disease. Some writers advise astringent lotions to contract the rings. In general, a cure is effected in a few months.

The term *oscheocoele* is applied to hernia when the portion of bowel slips through the abdominal or inguinal ring, and descends after the testicle. It is also termed *scrotal hernia*. The bowel and testicle are covered by the portion of peritoneum, called *tunica vaginalis*, which envelopes the latter.

Scrotal hernia will vary in size; may exist on one or both sides; be increased by coughing, crying, laughing, or sneezing; and disappear, like inguinal, when the infant is placed in the horizontal position, the bowels falling towards the spine by their gravity. It is important to distinguish this disease from

hydrocele; the one grows from above, downwards, the other from below, upwards, and affords distinct sense of fluctuation.

The method of cure is the same as in inguinal hernia. Reduction of the tumour by the taxis, or pressure with the fingers; the application of a pad or bandage, or truss; and affusion of cold water over the ring.

Prolapsus Recti.—Protrusion or falling of the rectum beyond the anus is rarely congenital, though of common occurrence in delicate infants. The reduction of this is easily effected with the finger, smeared with simple cerate or olive oil, introduced so as to push the upper part first, and then the lower. A starch and opiate clyster should be administered; a compress of lint placed on the anus, and over this a bandage properly applied. Astringent clysters, with opium, are sometimes necessary; and when the infant strains much, or evinces a frequent disposition to evacuate the bowels, a proper dose of opium or syrup of poppies should be administered by the mouth.

When the disease attacks children under five years of age, and continues for some days, in despite of the remedies already recommended, it will be advisable to use astringent fomentations and injections; as, decoction of oak bark with alum, or an injection of cold water with a few drops of liq. plumbi acet. and tinct. opii. In some cases, great pain and inflammation come on; and then leeches, with fomentations of chamomile and poppies, must be had recourse to. In chronic cases, a T bandage should be applied, and regularly worn; the child should sit on a hard, flat-bottomed chair, and of such a height that its feet may not touch the ground. This disease is sometimes troublesome to the adult, and its management is best described by Mr. Salmon.

Strabismus, or squinting, is caused by a torsion or displacement of the eyeball; the axes of vision are neither parallel nor direct, but converge or diverge, and are inclined upwards, downwards, or laterally.

One or both eyes may be affected; and the disease is congenital, hereditary, or accidental. The immediate cause of it is an unequal action of the motor muscles of the eyeball. The disease is sometimes induced by the nurse allowing the infant to view objects laterally, when the cot, or cradle, or bed, is so placed towards the light as to compel the infant to strain the eyes; or when the nurse wears a remarkable head-dress, &c.; or it may be induced by convulsions, hydrocephalus, dentition, irritation in the intestinal canal from worms, and many other causes.

When the disease is congenital, it is cured with difficulty, indeed, very rarely; but when accidental, it is easily removed.

When the infant squints, it should never be exposed to a direct light, the objects which please it are to be presented in the direct, and not the lateral position; and it should wear leather or wooden goggles, with the apertures

in the axes of vision, and, according to some, the openings in these instruments should be opposite to the direction of the eye; others advise spectacles, obscured except in one point, either directly in the centre of the axis of vision, or a little to the side opposite to that which the eye is turned.

When the period of childhood arrives, the eye must not be fatigued by reading; nor should other children be allowed to associate with the one so affected, as the power of imitation is great; and those whose eyes are well-formed may often contract a habit of squinting, and more especially if frightened; but they are seldom affected permanently.

I have known several children cured by the instruments already advised; but when the disease is hereditary, it is generally incurable.

There is another disease to be included among the displacement of parts which is occasionally observed, and that is *twinkling of the eyelids*.

I have known one case, in which the disease was incessant while the subject of it was awake. It may be congenital or accidental. It is ascribed by some writers to the conduct of parents and nurses in exposing young infants to the glaring light of theatres, fires, and candles immediately after birth, when the objects are too vivid and transitory to admit of an intent or steadfast gaze.

The real cause of this disease is as yet unknown; it is most probably dependent on a defective condition of the nerves which supply the eyelids; and as these are peculiarly sensitive and irritable, in such cases it would be most imprudent to expose an infant with this disease to a vivid light, more especially on awaking from sleep. It should be allowed to gaze upon objects which it cannot see distinctly. Its general health should be improved, by mild alteratives, aperients, and tonics; reading is injurious, all means likely to improve the health and strength should be employed; and if the disease continue, which it sometimes does, the use of partially obscured spectacles or goggles, as in strabismus, would be, most probably, advantageous. It may, however, continue incurable for life. The last class of external congenital diseases, comprises malformations and diseases of the tegumentary apparatus or skin. The diseases of this group are numerous, of equal interest with all others to the practitioner, and the source of great distress to parents. I shall first describe them, and in subsequent Lectures direct your attention to dermatonozology, or classifications, the definitions of cutaneous diseases, dermatopathology, or the nature of these, and their treatment.

The congenital diseases of the skin may be arranged as follows:—

Malformations and Congenital Diseases of the Skin.—It is well known that marks, deformities and diseases of the skin of the new-born infant, are by no means uncom-

mon. In some cases the skin is partially absent, altered in colour, is covered with excrescences, spots, various eruptions, ecchymoses or bruises, wounds, ulcers, and mother's marks, or *navi materni*. The scalp may be more or less tumefied, in consequence of the pressure it may sustain in certain cases of parturition, when the infant's head is large, and the pelvis or bony passage through it has to escape is small, or contracted. In some cases the cuticle, or scarf skin, is exfoliated or partially separated.

If we recollect the development of the skin and its extreme delicacy when first formed, we shall be able to understand how easily it may be affected with disease; though this knowledge will not account for many of the maladies to which it is liable in utero. It is proved that the skin is partially formed at first about the middle of the second month of embryonic life, when, according to Autenreith, the cuticle begins to appear. When certain parts of the body are absent, there will necessarily be an absence of skin, and its edges will be hard and adherent to subjacent or vicinal organs. Thus, in malformations of the head, chest, or abdomen, there may be more or less absence of the skin. — A familiar example is hare-lip.

Absence of the common integuments depends, according to M. Billard and others, on two different causes: 1. When the skin originally existed, but was destroyed, as in anencephaly, or want of portion of the skull; or spina bifida, or want of a portion of one of the vertebræ or bones of the spine; 2dly. When the skin never existed, in consequence of arrest or want of development of parts which it was intended to cover; and this is what usually happens in absence of the parietes or walls of the head, chest, or abdomen. M. Billard thought there were two modes of destruction of the skin of the embryo, during its sojourn in the uterus or womb. Tumours of the spine (*spina bifida hydrorachitis*), which increase, press on the integuments, cause them to ulcerate and rupture. We observe this happen in new-born infants, as the fluid in such tumours accumulates, distends the integuments, excites the absorbent vessels to thin or remove them; and the irritation is increased by the rubbing of such tumours, which can scarcely be avoided: by the most careful mother or nurse. Hence it is that a great majority of infants born with spina bifida, or a round soft tumour on some part of the spine, are generally destroyed in a few days or weeks after birth, though a few have grown to the adult age, and the tumour had increased to the size of an infant's, and sometimes even a man's head.

M. Billard endeavours to explain the cause of some diseases of the skin of the fœtus, by maintaining that the presence of tumours in the uterus during pregnancy may press on certain parts of the infant, and produce cutaneous disorganisations. In attestation of this opi-

nion, he relates the case of a new-born infant, in whom there was absence of the skin over the left parietal bone, in consequence of hernia cerebri (protrusion of the brain). It was replaced by a depressed cicatrix or scar, united, red, of an inch and a half in length, and four lines or about one-third of an inch in width: the bone was also absent about an inch; and this would have been ascribed to the pressure of a polypus, or some projecting body, against the cranium, had not the woman received a severe blow on the abdomen. It appears to me that it is possible the uterine cavity may be diminished by tumours or projections of some of the bones of the pelvis; and that undue pressure may be made on some part of the embryo; but when the fact is remembered that the fœtus after the occurrence of quickening, which may happen earlier than the fourth month and a half of its existence, is frequently changing its position, I cannot easily conceive how one part of it could be subjected to continued pressure.

This opinion was maintained by Hippocrates. He held in his treatise on generation (*De Genitura*, c. vi.), that if a pregnant woman received a blow on the abdomen, her infant would be injured on whatever part that corresponded with that on which the injury was inflicted, and also if the womb was narrow in any part. M. Lesage related a case in which the infant was injured in the uterus by a blow inflicted on the abdomen of the mother (*Bulletin de la Faculte*, 1805); and M. Geoffroy St. Hilaire cites a similar example, which was observed by Professor Chaussier. (*Mem. de la Societe Medicale d'Emulation*, t. ix. 1826.) Many analogous facts are recorded. It is well known to practical obstetricians that the infant, while in the womb, may not only be injured, or its bones fractured, but even killed by falls or blows inflicted on the abdomen of the mother: some examples of the latter have fallen under my own observations. Pregnant women have frequently declared that they never felt the fœtus move after the receipt of a violent blow on the abdomen; and offered this explanation for the infant having been born dead. Dr. Blundell, Dr. Merriman, and myself, were lately required to state in one of the law courts whether we had ever seen a case of fracture caused by a blow on the abdomen during pregnancy, but none of us had. Another explanation of the cause of the absence and ulceration of the skin is adduced by the zealous and lamented author whom I have quoted. Another cause still remains, M. Billard observes, to determine inflammation or ulceration of the skin of the fœtus before its birth. The absence of the contact of atmospheric air on the skin may, in some cases, produce in this membrane a local transformation, which gives it the characters of mucous membrane. It is this which we observe in the deep folds that the flexion of

the extremities causes in very fat infants, and as the consequence of old muscular contractions. Hébréad has long since cited facts of this kind, to demonstrate the analogy which exists between the skin and mucous membranes. (*Mem. de la Soc. Med. d'Emulation*, tom. viii.)—an opinion now generally received. There is no doubt, says the author, but the water of the amnios exercises on the surface of the fœtus in the womb, an action analogous to that of the air on the body of the infant after birth, when the position of the fœtus subjects a certain part of it to the action of this fluid which bathes it. Then the skin may become softened, inflamed, or ulcerated. The following case, observed by M. Ollivier (d'Angers), offers a very remarkable example:—

A female infant, aged two days, was brought to him on the 24th of April, 1828, who presented a rare variety of club foot, in which the two feet were reversed on both legs, in such a manner, that the dorsal face of each was directly applied to the anterior surface of the leg. On the left side there existed, above the external ankle, in the depression caused by the forced flexion of the foot on the leg, two ulcerations of the skin, very red and bloody, resembling a recent burn in the second degree. The right foot at its internal part, and in all the extent of the dorsal face, as well as the inferior kind of the anterior face of the corresponding leg, presented a large eschar of a greyish yellow colour, surrounded by a very red and bloody inflammatory circle. It strongly resembled a burn. The accoucheur observed these alterations at the moment of birth, and he applied proper bandages to secure the legs in the natural position, and saturnine applications, which finally effected a complete cure.

In cases of absence of the skin at birth, a bandage ought to be applied to protect the organs which are deprived of the natural teguments; and other means should be used to favour the cicatrization or healing of the ulcerated parts.

Exfoliation of the Cuticle.—This disease is occasionally observed very soon after birth, especially in the folds and creases of the skin as in the groins, between the nates, in the folds of the neck, behind the ears, and under the arms. M. Billard attempts to account for it in the following manner:—The integuments of the infant have been immersed in a fluid for seven months, and hence they are in a state of continued suppleness and humidity. The epidermis is, as it were, imbibed with the amniotic fluid which surrounded the infant in the womb, at the period of birth. On exposure to the air it undergoes dessication, loses the suppleness it possessed during intra-uterine life. There results from this dessication, which the cutaneous imbibition or insensible perspiration cannot oppose, a scaling and falling-off of the

epidermis or cuticle, either in the form of scales or of powder.

In proportion, as the layers of the epidermis are elevated, the subjacent layers form an evident substance. The skin under the elevated layers is red, very irritable, and very readily inflames. This is of common occurrence on the genitals, groins, and about the anus, from the irritation of the urine and fæces, together with that caused by severe friction with napkins, for the purpose of cleanliness; and these parts are often attacked with inflammation, ulceration, erysipelas, and sometimes with gangrene. Nurses often induce it by means of a piece of flannel called a "pilcher," which is stitched to the dress so as to cover the napkin. This becomes saturated with urine, prevents the nurse from discovering when the infant has wetted itself; and the consequence is, irritation, excoriation, and often ulceration of parts about the pelvis. This piece of dress should never be used; it is an excuse for laziness on part of the nurse, and the cause of serious disease to the infant. The infant should be changed, powdered, and a dry napkin applied whenever it wets or soils itself.

It appears to me that the accumulation of perspiration in the folds of the skin is more likely to act as a source of irritation than the exposure to the air; because the cuticle of the face and limbs, which is most exposed, very rarely, unless in cold weather, exfoliates. If we add to this the rude frictions which are so generally employed as preventives, we have more obvious causes for epidermic desquamation than the dessicating effects of the atmosphere.

The author, from whom I quoted, partly admits this view, as he observes, the epidermis not only re-produces itself in those parts which are freely exposed to the contact of the air; but in the folds of the skin, as under the arms, in the neck, groins, &c., the exfoliation is effected by these parts being deprived of the contact of the air—these secrete like mucous membranes, or muciform fluid, which dries readily, and favours the formation of a new epidermis by the application of a dessicating powder (starch, tutty, flour, fuller's earth, &c.), on the secreting surface. This circumstance proves that the epidermis is a cutaneous secretion, an organic layer, destroying and re-establishing itself according as the cutaneous surface is exposed to the air, or when its direct influence is removed.

The removal of the epiderm in new-born infants favours cutaneous absorption, as the derm (skin) is not covered by the layer which protects its absorbent surface. By this means we are enabled to convey medicines into the system which in some cases are administered with difficulty to new-born infants. This is an endermic method. The iatroleptic method was formerly at-

tempted by immersing delicate infants in baths of milk, broth, wine, &c., but as the cuticle was entire, the absorption was scarcely perceptible.

Desquamation of the cuticle is often seen in infants of one or two months old, more especially when they are affected with cutaneous eruptions. We have had many such cases at St. John's Hospital, and at the Western Dispensary.

The best mode of treatment is the application of cold water, or a solution of liq. plumbi acet. or vegeto water, and then the free use of the absorbent powders just mentioned. The general health should be attended to, the bowels regulated, the secretions rendered natural by calomel, castor oil, manna, magnesia, with small doses of rhubarb and hyd. cum creta, and nutritious aliment, ought to be administered freely. If ulceration or gangrene supervene, quinine, wine, aromatic spirit of ammonia, with antiseptic lotions or poultices, sprinkled with a weak solution of the chloride of lime or soda, will be indispensable.

Cutaneous Excrescences.—Prolongations of the skin are sometimes observed on different parts of the body, but more commonly on the face, hands, and feet. M. Billard saw a case of female infant, at the Foundling Hospital, in Paris, (l'Hospice des Enfants-Trouvés,) on each of whose cheeks was a prolongation of skin, about half an inch in length, and as thick as a crow's quill. There were two others under each ear. The infant was healthful. He advises a ligature in preference to excision, for the removal of such growths: but he does not state whether he had used it in the case above-mentioned.

He refers to horny growths on adults and aged persons; and thinks they may possibly exist on new-born infants.

Hairy Infants—Diseases of the Hair.—Haller, Valisnieri, and others, describe new-born infants covered with hair; and examples of this kind have been observed within a few years in London. Hairy children have been exhibited at the Medical Societies and Hospitals, within a recent period. In these cases, the lower part of the trunk and extremities were covered with hair; but Haller saw the face, body, and limbs, entirely covered. It is impossible to explain the cause of this excessive capillary growth, except as an irregularity of the general laws of embryogeny. It has happened that new-born infants who were covered with long hairs were delicate and badly developed, and as they acquired strength, the hair fell off without the use of any remedy. In such cases, great caution is necessary before resorting to topical applications; because the skin is extremely sensible, easily irritated, and inflamed; and these conditions would be followed by a decline of health, or by convulsions or death.

In some cases there is scarcely any hair on the body; and this can be accounted for by

want of the normal development. It only exists at, and seldom continues beyond, the first years of birth. Another anomaly of the hair, is its detection in deep-seated subcutaneous tumours, in the wall of the amnios and in the ovary. This is most commonly observed in adults.

Parey describes a disease of the hair, which he calls *malum pilare*, which arises from the hairs being loosened at the bulbs, but not expelled from the cuticle. This is most common on the backs of infants. The disease is accompanied by constant itching, and the evolution of irritable papulæ or pimples. The treatment consists in the use of warm fomentations and bread poultices, and as soon as the hairs are loose, to extract them with a forceps or tweezer. This disease must be distinguished from the *lichen pilaris* of adults, which is caused by derangement of the digestive organs. But of this, more fully hereafter.

The bulbs of the hair are subject to inflammation, as exemplified in *plica Polonica*, and the pilous or hairy follicles may be atrophied or destroyed by the pressure of subcutaneous tumours, *trinea favosa*, or syphiloid diseases. Supernumerary hairs may exist in different regions of the body, on which they do not appear naturally. Facts of this kind are attested by many writers. The colour of the hair may gradually or suddenly change, more especially in adults, after violent mental motions, or during convalescence after acute diseases; or we may observe patches of different colours on the head of the same individual. This, however, is a rare occurrence in infants. I lately attended a learned judge, whose hair all over the body changed colour during convalescence, but finally gained its natural hue. Another adult lost all the hair of the body, and did not regain it.

Diseases of the Nails.—The nails may be absent, abnormally enlarged, or malformed in new-born infants. They vary very much in their structure; they have been found in melicerous and steatomatous tumours. They are also liable to many diseases during infancy, which will be noticed hereafter.

Alterations in the Colour of the Skin.—Alterations in the colour of the skin are numerous. Infants may be born with varied coloured spots on different parts of the skin. Haller reports examples of black infants born of white parents, and white infants born of negro parents. Many modern writers, however, doubt the truth of this statement. Alterations in the colour of the skin are only to be explained by our notions on embryogeny. M. Billard well observes: "The skin does not evidently offer, at the early period of the evolution of the embryo, all the parts which ought to enter into its structure:—it is a simple, thin, transparent pellicle, which may be said to be a continuation of the amniotic tunic, which covers the umbilical cord. We do not as yet distinguish

the line of demarcation which exists at the point of insertion of the umbilical cord.—It remains thin and uncoloured to the fourth month, but then augments in consistence and thickness; the blood abounds in the subcutaneous capillary network, and the teguments of the foetus assume a very manifest rosaceous colour. It is to this afflux of blood towards the skin it owes its colouration; and it is to different modifications which the blood undergoes in furnishing the colouring principle to the skin, that this last owes the different shades of colour it presents according to species."

The blood undergoes different changes in its composition and in its course; and these M. Billard explains in the following manner:—

1. It sometimes happens that the blood is suddenly interrupted in its course—is extravasated—escapes from its natural passages to be deposited irregularly in the surface, and in the thickness of different organs. It is this that Werlhoff, Stoll, and many other authors, have observed;—it is this that constitutes what is called spotted disease (*maladie tachetée*), petechiæ, or hemacelinose (Werlhoff, Stoll, Rayer).

2. The blood accumulated in a part, whether by yielding to the laws of gravity, or whether by the inflammatory stimulus there concentrated, often terminates by acquiring a violet, brownish, and finally a black colour. It is this that we remark on the surface of the lungs and intestinal tube; and it is this that almost always forms, according to me, the striated and black patches which we observe on the surface of mucous membranes.

3. In fine, the blood cannot always furnish to the skin its colouring principle, because that part of the sanguineous fluid destined to produce this may be wanting in certain individuals, or the cutaneous vessels may not be able to receive it; and then the integuments and hair preserve the colouration they presented at the early period of foetal evolution, offering an aspect peculiar to Albino.*

After these considerations, it is possible that infants, who are said to be born with spots, black or white, have been found in such circumstances during intra-uterine life, that the blood which is extravasated to form spots or petechiæ, has not furnished to the integuments the matter which habitually colours them; it is this that produces Albino infants, or it has been subjected to an alteration of colour, which has caused a brown or blackish aspect of the integuments; and this has been recently observed in an adult at the hospital of La Charité. This is the best explanation I have seen of congenital spots on the skin. The au-

* *Reflexions sur la Leucopathie considérée comme le résultat d'un retard de développement. Par Dr. Mansfeldt. Journ. Complém. du De des Sci. Méd. 1826. T. 23.*

thor might, however, have added some observations on congestion of the skin (apoplexia cutis), the interruption to the circulation, which causes lividity of the cheeks in asphyxia of new-born infants, and the cadaverous lividities (maculæ morientium) which are observed on the most dependent parts of the body in the agony of, or immediately after, death. He has omitted to notice in the above remarks,—but does in a future section,—the morbus cæruleus, cyanosis, or blue jaundice, the subcutaneous hæmorrhages or dermatorrhagia, as (ecchymoses, sugillations, or bruises), hæmacelinoses, or spotted hæmorrhagic disease, formerly termed purpura hæmorrhagica, or petechiæ sine febre. He has, however, described general and congenital leucæthiopia, albinism or general whiteness, but not aurigo, icteritia, or jaundice. It is but justice to add, that some of these are scarcely to be considered as congenital diseases; though I am disposed to think it possible all of them may be observed on the skin of the new-born infant. I am led to hazard this observation, as Gaultier has described congenital bronze marks. (*Recherches sur l'Organisation, de la Peau de l'Homme*. Paris, 1819.)

EXTRAORDINARY CASE OF TETANO-EPILEPTIC CONVULSIONS.

The following case is one of great interest, and we shall therefore place it in full before our readers. We copy from our valued contemporary the *Medico-Chirurgical Review* for April:—

A case of this kind lately occurred in practice, which exceeded in melancholy interest any thing ever witnessed by ourselves, during a very long course of observation and experience—and we believe we can say the same on the part of several other physicians and surgeons who were in professional attendance—among whom were Sir A. Cooper, Dr. Bright, Dr. Farre, Dr. Watson, Mr. Macintyre, Mr. Chisholme, and others.

The patient was a gentleman of large fortune, aged about 52 years, though apparently much older; but who had been remarkably active and strong till within the two or three last years of his life. At that time he fell from his horse, while at some distance from his mansion in Wales, in a kind of fit, the exact nature of which could not be ascertained, as it was over before medical attendance could be procured. It was considered to be epileptic, because he had subsequently several attacks of the epileptiform character. In the latter part of November last, Dr. Johnson was called into attendance on this gentleman, in consequence of a bronchitic affection under which he was labouring, and a very obstinate constipation of the bowels. The bronchitis

was not very acute, and was readily relieved by the usual means. The bowels were also brought into a more manageable state by proper aperients, and the patient was as well as to go out in his carriage, and Dr. J. only called occasionally to see him. It was during this period that Dr. J. learnt some particulars of the epileptic seizures which had previously occurred. The patient, though not a man of much intellectual power, did not appear to have had his sensorial energies in the least degree impaired by the epileptic paroxysms.

On Friday night (26th Dec.) the patient, after some anxiety and want of sleep, occasioned by a domestic event, not of a mournful nature, was seized with a violent fit, or, rather, series of fits, which lasted several hours. They were evidently of the epileptic kind, and were followed by a semi-apoplectic sopor, such as often succeeds the epileptic convulsion. When the stupor subsided, the patient was perfectly sensible, and merely complained of soreness in the muscles, but no head-ache, except when he coughed. His bowels were opened by medicine, and it was hoped that the paroxysm would not return. In this hope we were grievously disappointed. It was only the first of a series of paroxysms that attacked this unfortunate gentleman, with more or less violence, and with longer or shorter intervals, from the 26th of December till the 2d day of January, when death put an end to the most dreadful sufferings which patient ever endured, or physician witnessed in this world.

Although the paroxysms varied considerably, in respect to intensity, duration, and intervals, yet they were so identical in kind, that the description of one may serve for all. The premonition was a quivering sensation in the muscles of the lower extremities, which caused the patient to cry out—"The spasms are coming on—hold me, hold me!" He then groaned loudly, till the spasms took away all power of speech. The face was drawn violently towards the left side, as were the eyes. The left arm was bent, and drawn across the chest, the fist being clenched. The left leg and thigh were drawn upwards, and bent across the other leg and thigh. Thus the flexors and abductors of the left extremities overcame the extensors and abductors; but not by one uniform convulsive contraction, as in tetanus, but by a series of the most rapid and painful vibrations. These vibrations could not be counted; but they were perfectly cognisable by the eye and the touch. The muscles of the other side of the body, and of the limbs, underwent similar convulsive vibrations, but were not rigidly contracted at the same time, as on the left side. Thus the abdominal muscles could be seen and felt in this convulsive and vibratory state, and it was evident, from the respiration and the voice (when the latter was

audible), that the diaphragm suffered in common with the muscles of voluntary motion. There never was well-marked opisthotonos or embrothotonos, though the muscles on the front of the body were more convulsed and contracted than those on the back, with the exception of the large muscles about the back of the neck, which generally drew the head backwards, while the face and eyes were drawn to the left. After all the severe paroxysms, the left arm remained, for a time, completely paralytic. If the interval was of some duration, it regained sense and motion in a considerable degree.

The paroxysms were very various in duration—lasting from one minute to fifteen or twenty. They differed much in intensity; since the patient, in some attacks, retained his consciousness, and in others he was totally insensible, and remained so for many minutes after the paroxysm was over. Whenever the consciousness did return, whether immediately on the cessation of the spasms, or after a short lapse of time, the intellectual functions were as clear as at any period of the patient's life. The intervals were also very various as to duration. Sometimes they extended to several hours—at other times, they actually ran into one another—one paroxysm having scarcely ceased, when another commenced. In every attack, the pulse rapidly increased in frequency, and became smaller in calibre. In the severe paroxysms, it was almost imperceptible, and quite innumerable. After the paroxysm, it gradually became developed, full, and strong.

In all the severe paroxysms, the breathing became dreadfully laborious, quick, and wheezing. Many times we expected that the patient would expire, from the collection of mucus in the trachea and bronchia, and from the inadequate supply of air to the lungs. These attacks continued day and night, with longer and shorter intervals, till the 29th of December, when, after a series of frightful paroxysms, the patient fell, apparently, into the "agonies of death," or rather into that state of insensibility which precedes dissolution. The breathing was laborious and stertorous—dead rattles in the throat—eyes open and inanimate—total paralysis of the whole body—mouth wide open—evacuations passed involuntarily—skin cold and clammy—in short, he appeared in *articulo mortis*, from which not one of his medical attendants conceived a possibility of emergence. Several of them waited, hour after hour, to see the final close. This state lasted six hours and upwards. In the course of this period, we occasionally perceived a slight tremor or quivering in the tendons of the wrist, during which, as in the severe paroxysms, the pulse became nearly extinct, the breathing short, broken, and hardly perceptible, and life itself in the act of

vanishing! Strange to say, from this low ebb he rather suddenly emerged—spoke; took nourishment, and became considerably better than he had been at any period during the two preceding days. Sanguine hopes were entertained of his recovery during the 30th and 31st days of December—there being often a considerable interval between the paroxysms, during which he was cheerful and full of hopes himself!

It was after this miraculous resuscitation that we observed a phenomenon not before presented, and which did not afterwards recur. In two successive paroxysms, the face and eyes were drawn violently to the right side, the spasms in the extremities and trunk continuing nearly the same as usual.

The constitution, which had hitherto borne up wonderfully against such unparalleled tortures, now evidently began to give way. The features became shrunk, and expressive of unutterable suffering; and he expressed a conviction—almost a wish, that the Almighty would release him from his agonies, one way or other! The paroxysms continued, but neither so violent nor so protracted as at an earlier period of the disease:—he got some sleep in the night of the 2nd of January, and expired towards the morning.

We have not interrupted the narrative of this terrible malady, by an enumeration of the remedies employed—for, candidly speaking, we very much doubt whether the disease was, in any material degree, even mitigated by the various means that were tried in this deplorable case. When the list of medical attendants is referred to, it will hardly be doubted that every remedy which talent or experience could suggest was fairly employed. Cupping, leeching, blistering, purging—and, lastly, *mercurialization*, were tried—and all failed. The dissection will well excuse the want of success in therapeutic agents. One feature was prominent throughout—the extreme vitiation of the fecal evacuations. They continued of the most depraved kind till the last—or till there was nothing more than mere watery secretion to come away. Opium was not extensively employed, on account of a most decided antipathy which the patient entertained against the medicine. In early life this gentleman had studied physic, and he was able to detect at once the smallest quantity of opium, when exhibited, by its effects on his bodily and mental functions. It is very doubtful, however, if the extensive exhibition of opium, in any shape, would have been productive of any material benefit. The only remedies which seemed to promise any mitigation of the symptoms were purgatives and mercury. The former generally diminished, for a short time, the frequency and violence of the spasms:—the latter (calomel in two or three-grain doses every two or three hours)

promised, at one time, a relief that engendered hopes of a happy result; but alas! these hopes were delusive, and every remedy failed in the end. The calomel could not be got to affect the mouth—and ultimately so irritated the bowels, that opiates became indispensable.

Dissection.—It was with the greatest difficulty we got permission to examine the head. Sir Astley Cooper, Dr. Bright, Dr. Watson, Dr. Johnson, Mr. Macintyre, Mr. Balderson, and Mr. H. J. Johnson, were present. The cranium was remarkably thick, especially about the os frontis, where the diploe was obliterated. The membranes covering the fore and upper part of the right hemisphere were thickened, and strongly adherent to the subjacent brain. In the falciform process, deep between the anterior lobes of the brain, and near the inferior longitudinal sinus, was found a rough and jagged bone, an inch and a quarter in length, by about half an inch in breadth, well calculated to irritate both hemispheres. In the middle of the anterior lobe of the right hemisphere, near its upper surface, was found a portion of brain, larger than a walnut, reduced to the consistence of a yellowish fluid, contained in a cavity lined by a polished surface, but not exhibiting the organization of a membrane, or cyst. Surrounding this cavity and its liquid contents, the medullary substance of the brain was preternaturally hard and firm, like an indurated circle, contrasting remarkably with the brain in general. The substance of the brain, immediately under the thickened and adherent membranes, was in a state of *ramollissement*. There was considerable vascularity about the base of the brain and pons varolii, but no other morbid appearance deserving of notice.

Many circumstances, which cannot be mentioned here, combined to render this case exceedingly interesting—and not the least of these was the horrible torture experienced by the patient himself, once one of the faculty, and nearly connected with some of the first medical characters in this or in any other country. We here see an organic lesion, or rather lesions, of the brain, which must have been of several years' standing, and yet producing functional disturbance only occasionally—and often at long intervals—the health, in such intervals, being apparently good—at all events, without any impaired state of the cerebral functions. It may be a question, what part the bony deposit in the falx took in the chain of causation. We are of opinion that, in conjunction with the great thickness of the cranium, this irritating body, placed deep between the two hemispheres of the brain, must have conducted largely to the epileptic attacks with which the patient was troubled for some years previous to his last illness. The diffident portion of brain, in the anterior lobe of the

right hemisphere, must have been of some standing; but we are inclined to think that it was rather an effect than a cause of the epileptic seizures—at all events, that it took place *posterior* to the early attacks, and, consequently, could not be considered in the light of *their* cause. But that it was mainly instrumental in the fatal catastrophe we have little doubt. The convulsions were always greater in the left than in the right side—while the face, excepting in two paroxysms, was constantly drawn to the opposite side in the fits. The most inexplicable part is the circumstance of the paralysis, which generally succeeded the violent spasms of the *left* arm, but without any such event in the left side of the face. Why was the face drawn twice to the *right* side—and all the rest of the times to the opposite side? This is a puzzler? Could the bony deposit in the falx, situated *between* the two hemispheres, account for this phenomenon? Circumstances might possibly arise, in the course of the disease, that might cause the irritation to be more directed towards one hemisphere than towards another, at different periods. It is remarkable that, with such lesions, health should be but slightly impaired—and the mental functions not at all—the day before the fatal attack commenced! The disordered condition of the bowels was the only ostensible cause why the disease was called into such destructive activity. This gentleman had strong prejudices—we might say antipathies, especially against calomel, and every preparation of opium. He had also the strongest objections to many other medicines—circumstances that crippled his medical attendants in the first few days of the malady, and probably proved detrimental to the patient himself. Considering that the organic changes must have existed for a long time, it is by no means improbable that, if the digestive functions had been restored to a healthy state during the first two or three days of the spasms, the termination might have been otherwise than it was, and that a temporary respite might have been obtained.

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Therapeutic Agencies of the Stinging-nettle, Urtica Urens.

M. Fiard concludes from some experiments, 1. That the decoction of nettle should be tried in moderate doses as an anti-diuretic in diabetes. 2. That it would most probably prove an efficacious means of producing a derivation in hydro-thorax and hydrocephalus. 3. That in serious disorders resulting from the suspension of the lacteal secretion in lying-in women, it would be likely to cause a renewal of secretory activity in the breasts.—*Gaz. Med.*, April 18.

A NEW PRACTICAL FORMULARY

OF HOSPITALS, OR A

Collection of Formulae of the Civil and Military Hospitals of France, Germany, Italy, Great Britain and Ireland, &c., containing the Indication of the Doses in which simple Substances, magistral and officinal Preparations of the Codex are administered, the use of New Medicines, and general receipts on the art of prescribing. By M. EDWARDS, M. D., and P. VAVASSEUR, M. D., of the Hospitals of Paris—1834. Translated and augmented by M. RYAN, M. D. &c. &c.

(Continued from p. 371.)

Powder of Digitalis. H. of Germ.R_x. Digitalis pulveris, gr. ij;

Calami aromatici, gr. v.

Sacchari purificati, gr. xij.

Divide in chartulas duas, quotidie sumendas.

Diuretic Powder. H. of Italy.R_x. Digitalis pulv., gr. xv;

Potassæ nitratis, ʒ iij;

Potassæ tartratis, ʒ iv.

Divide in chartulas vj quarum capiat, unam secundâ quâque horâ.

Nauseating Powder. H. of Italy.R_x. Digitalis pulveris, ʒj;

Ipecacuanhæ pulv., gr. viij.

Fiant pulveres viij, quorum capiat unum secundâ vel tertiâ quâque horâ.

Anodyne Pills. H. of America.R_x. Pulveris digitalis,

Opii, ā ā gr. vj;

Confectionis rosæ, q. s.

Fiant pilulæ xij, ex quibus sumatur una quartâ quâque parte horâ.

*In asthma.**Nauseating Boluses.* H. of Italy.R_x. Pulveris digitalis, gr. xv;

Ipecacuanhæ, gr. iij;

Succi sambuci,

Pulveris glycyrrhizæ, ā ā q. s.

Divide in bolos vi quorum sumat unum secundâ quâque horâ.

*In hæmoptysis &c.**Expectorant-Pills.* (Ryan.)R_x. Pulveris digitalis,

Scillæ,

Ipecacuanhæ, ā ā, ʒj;

Confectionis rosæ, q. s.

In pilulas xx divide, quarum capiat unam mane noctque.

[In chronic bronchitis, asthma, senile catarrh, &c. T.]

Diuretic Pills. H. of Italy.R_x. Pulveris digitalis,

Scillæ, ā ā gr. xij.;

Extracti hyoscyami, gr. ij.

Fiant pilulæ vj, de quibus capiat unam secundâ quâque horâ.

*In angina pectoris, asthma, and chronic bronchitis.**Detection of Digitalis.* H. of Germ.R_x. Digitalis folior, ʒ ss;

Aquæ fontanæ, ʒ xx.

Decoque ad ʒ xij, cola et adde.

Spiritus rectificati, ʒ ij.

Dosis, cochleare amplum, secundâ quâque horâ.

Infusion of Digitalis. H. of England.R_x. Digitalis foliorum, ʒj;

Aquæ ferventis, ʒ viij;

Maceræ, quartas horas, cola et adde.

Spiritus cinnamoni, ʒ ss.

Misce.

Dosis ʒj bis in die.

Anodyne Potion. H. of Germ.R_x. Tincturæ digitalis, ʒjss;

Hyoscyami, ʒj;

Emulsionis camphoræ, ʒ iv.

Flat potio, cujus capiat cochleare minimum pro dosi.

Diuretic Potion. H. de la Ch.R_x. Tincturæ digitalis, ʒj;

Infusi theæ, ʒ iv;

Mellis scillæ, ʒj.

Dosis, cochleare unum secundâ horâ.

BELLADONNA.

In large doses, belladonna is a narcotico-acrid poison; in small ones, a narcotic. It is much recommended in the treatment of whooping-cough, convulsive cough, tic douloureux of the face, and other nervous affections. It is employed with advantage in cases of cancer, dysentery, hydrophobia, jaundice, &c. It is sometimes useful as an external application in combating acute and chronic inflammations of the skin, white swellings of the articulations, rheumatic affections, &c. It acts on the iris, and is employed in contraction of the pupil. It is also used to cause dilatation of the pupil before performing the operation for the extraction of cataract, as likewise of dilatation of the neck of the uterus, in cases of spasmodic rigidity of that organ, which impedes labour. [I have never found it successful. T.]

INTERNALLY. Powder. Gr. j—xij, in pills.*Infusion.* ʒj in ʒ viij of boiling water, of which ʒj—ij should be taken daily.*Extract.* P. Gr. lʒ—iv, in pills.*Powder of Belladonna.* H. of Germ.R_x. Pulv. rad. belladonnæ, gr. iij;

Sacchari albi, gr. xvij.

Divide in chartulas ij in die sumendas.

Pills of Belladonna. H. of Italy.R_x. Extracti belladonnæ, gr. iv;

Succi sambuci, q. s.

Fiant pilulæ xvj, de quibus capiat unam secundâ quâque horâ.

In whooping cough and scarlatina.

Prophylactic Solution against Scarlatina.
(Hahneman.)

Rx. Extracti belladonnæ, gr. ij;
Aque destillatæ, ℥j.

Liqua.

From one to five drops should be given four times a day.

For children under six years, and above that age, gut. vi to x may be given.

[The prophylactic power of this remedy is lauded by the Germans, and by Dr. Mac-michael. T.]

Syrup of Belladonna. H. of Germ.

Rx. Belladonnæ foliorum, ℥ij;
——— radicia, ℥j;
Sacchari albi, lbj;
Aque fontanæ, q. s.

Coque ad Oj, et cola.

The dose is a tea-spoonful in whooping cough.

Anodyne Potion. H. of Germ.

Rx. Extracti belladonnæ, gr. ij;
Aque destillatæ, ℥ij.

Fiat potio, cujus capiat guttas v, ad x pro doli.

In nervous vomitings.

EXTERNALLY. *Infusion*, in lotions, &c.

Extract, in frictions on the eyelids, to obtain dilatation of the pupil, and on parts affected with neuralgia.

[Also as a plaster in lumbago and spinal irritation. T.]

Pomade of Belladonna. H. de la Mat.

Rx. Extracti belladonnæ, ℥ij;
Aque destillatæ,
Cerati simplicis, ā ā ℥ij.

Fiat unguentum.

Employed with success to obtain dilatation of the neck of the uterus, in difficult cases of labour. About ℥ij should be applied to the organ, by means of a small syringe.

The Ointment of Belladonna, of the English Hospitals, is composed of equal parts of the extract of belladonna and cerate. It is employed with advantage in frictions, in cases of white swellings, and to prevent spasmodic contractions of the urethra, and the sphincters.

Enema of Belladonna.

Rx. Folior. belladonnæ, gr. xij;
Aque ferventis, ℥vj.

Macera.

Employed with advantage in spasmodic contractions of the urethra, which sometimes prevent the introduction of a catheter into the bladder.

HENBANE.

In large doses, a narcotico-acrid poison, in smaller ones it acts as a sedative on the nervous system. It is recommended in the treatment of neuralgia, epilepsy, hypochondriasis, nervous coughs, plumbers' colic, muscular trembling, &c.

[Mr. Houlton has made many improvements with this medicine, and is of opinion

that the London College of Physicians has erred in advising the plant to be collected annually—it should be biennially. T.]

EXTERNALLY. The leaves are employed in cataplasms on cancerous tumours, to abate pain; as likewise in lotions, fomentations, baths, &c.

INTERNALLY. *Powder.* Gr. j—℥j. Not much used.

Extract. P. The same doses, in pills.

Sedative Boluses. H. of Italy.

Rx. Extracti hyoscyami, gr. viij;
Gummi acaciæ, ℥vi;
Succi sambuci, q. s.

Fiant boli xij, de quibus sumat unam tertiam quaque hora.

In gastrodynia, spasmodic colic, &c.

[I have found the following pills extremely valuable in hysteria, and for nervous women during uterine gestation:—

Rx. Extract. colocynth. comp. ℥ij;
——— hyoscyami, ℥j;
Hydrargyri subm. gr. vi—xij;
Olei menthe piper. ℥v;
Strychninæ pulveris, gr. j.

Tere intime, et in pilulas xij—xv divide, capiat j mane vespereque.

This is an efficacious aperient, not only in the diseases mentioned, but also in the different forms of dyspepsia. The hyoscyamus is requisite to correct the drastic effects of the colocynth; the mercury is necessary in the majority of cases, as most patients suffer from disordered liver; the oil of mint is a carminative, and the strychnine a most powerful agent on the nervous system. T.]

Narcotic Emulsion. H. of Germ.

Rx. Olei amygdalarum, ℥j;
Aque fontanæ, ℥iv;
Mucilaginis acaciæ, q. s.

Fiat emulsio et adde,

Syrupi simplicis, ℥j;
Extracti hyoscyami, gr. x.

Misce.

Dosis cochleare modicum omni hora.

Sedative Potion. H. of Germ.

Rx. Extracti hyoscyami, gr. v;
Aque lactucæ, ℥iij;
Syrupi communis, ℥ss.

Dosis ℥ss pro re nata.

EXTERNALLY. *Decoction.* In frictions, fomentations, &c.

Oil of Henbane. P. In frictions.

Narcotic Cataplasm. P. q. s.

Lotion of Henbane. H. of England.

Rx. Extracti hyoscyami, ℥j;
Aque destillatæ, ℥iij.

Collyrium of Henbane. H. of Germ.

Rx. Extracti hyoscyami, gr. x;
Aque destillatæ, ℥ss.

Fiat collyrium.

Employed to dilate the pupils, and in ophthalmia accompanied with spasmodic contraction of the eye-lids.

Anodyne and Resolvent Liniment. Hôt. D.

Rx. Extracti hyoscyami, 3 ss;
Saponis duri, 3 ij;
Olei tilis, 3 vj.

Fiat linimentum.

A spoonful employed in frictions, in certain cases of glandular swellings.

WHITE HENBANE.

This is not so active as the black. It is employed in the form of

Sirap of White Henbane. (Chevalier.)

Rx. Extracti hyoscyami albi, gr. iv;
Syrupi simplicis, 3 iv.

Liqua. Dosis 3 ss. In a sedative potion.

HEMLOCK.

In large doses a narcotico-acrid poison, whose action is principally on the brain. In small doses its action resembles that of belladonna. It is employed as a sedative in the treatment of nervous affections, priapism, obstinate cough, &c. It is also recommended in cases of enlargement of the mammae, and in scirrhus and cancerous affections, of which it diminishes the pain. It appears to be also useful as an external application in certain chronic enlargements of the viscera.

Subst. incomp. The acids.

INTERNALLY. *Powder.* Gr. ij—3j, in pills.

Extract. P. Gr. ij—3j, in pills.

Extract préparé sans fécule. P. Gr. j—xv.

Suc exprimé. P. Gutt. xiv—xxiv, in a potion.

Teinture Éthérée. P. Gutt. x—xx, in a potion.

Pills of Hemlock. (Stoerck.)

Rx. Extracti conii, 3 j;
Pulveris folior. conii, q. s.

Fiat massa, in pilulas granorum ij, distribuenda, de quibus sumat unam ad quatuor bis in die.

[Some recommend the extract combined with acetate of lead, but the solution of the latter is preferable.—(See *Acetate of Lead.*) T.]

Pilules Depurative. M. de Santé.

Rx. Extracti conii, 3 iv;
—— opii, gr. xvij;
Hydrargyri submur. 3 ss;
Syrupi althæe, q. s.

Fiant pilulæ xxvi, harum capiat duas quotidie.

The number may be gradually augmented.

Used to allay the pains which accompany certain organic affections. Each pill contains gr. 8 of hemlock, gr. 1 of calomel, and gr. ½ of opium.

Infusion of Hemlock. H. of England.

Rx. Conii,
Coriandri sativi, ā ā 3 ij;
Aquæ ferventis, 3 viij.

Macera et cola. Dosis 3 i—ij bis vel ter in die.

Compound Mixture of Hemlock. H. of Eng.

Rx. Extracti conii, 3 j;
Sodæ subcarbonatis, 3 iss;
Aquæ cinnamomi, 3 vi;
Decocti glycyrrhizæ, 3 ix.

Misce. Dosis cochl. medium semel vel bis in die.

Anodyne Potion. H. of Germ.

Rx. Extracti conii, 3 j;
Aquæ cinnamomi,
Syrupi aurantii, ā ā 3 ss.

Dosis 3 ij pro re nata.

[The following mixture will alleviate the numerous nervous disorders, or pains in phthisis:—

Sedative Mixture. (Ryan.)

Rx. Extracti conii,
—— hyoscyami, ā ā 3j—3 ss;
Mucilaginis acaciæ, 3 j;
Misturæ camphoræ, 3 iv;
Tincturæ digitalis, 3 i—iss;
Acidi hydrocyanici, m vi—viij;
Vini ipecacuanhæ, 3 i—ij;
Syrupi toluani, 3 iv—vi.

Sit mistura, cujus sumat cochl. amplum, phialâ prius agitâtâ, secundis vel tertiis horis. T.]

EXTERNALLY. *Decoction,* 3 j—Oij of water, employed in lotions, fomentations, &c.

Oil of Hemlock. P. G. v, in embrocations.

Plaster of Hemlock. P. G. v.

Cataplasm. 3 ij in lbij of common cataplasm.

Fomentation of Hemlock. H. of England.

Rx. Conii folior. 3 ij;
Anthemidis florum, 3 ss;
Aquæ, Oij.

Macera et cola.

Cataplasm of Hemlock. H. of England.

Rx. Conii, 3 ij;
Micæ panis, 3 vj;
Aquæ, q. s.

Fiat cataplasma.

STRAMONIUM, OR THORN APPLE.

In large doses a narcotico-acrid poison; in small ones its action is similar to that of belladonna. It is recommended as a sedative in convulsions, neuralgia, rheumatism, &c. It is not much used at present.

[Dr. Kirby, of Dublin, employed it in facial neuralgia, and others advised it to be smoked in asthma. T.]

INTERNALLY. *Powder.* Gr. i—xx, progressively increased.

Extract. P. Gr. ½—ij, in pills.

Syrup of Stramonium. H. of Germ.

Rx. Seminum stramonii, 3 j;
Aceti communis, lbj.

Macera per dies duas in vase clauso cola et adjice,

Sacchari, lb ij.

Dose, ʒ ij—iv, in a sedative potion, or a tea-spoonful every three or four hours.

In nervous affections.

Wine of Stramonium. H. of Germ.

Rx. Seminum stramonii, ʒ ij;

Vini albi, ʒ viij;

Spiritus rectificati, ʒ j.

Decoque per duas dies lento igne, et cola. Dosis, gutt. vi—ʒj, ex cyatho aquæ cum saccharo.

As an anodyne.

Hufeland considers this preparation superior to that of opium.

TOBACCO.

In large doses a narcotico-acrid poison; in small ones it is a violent irritant of the intestinal mucous membrane, and a narcotic.

Tobacco is used in divers preparations in cases of chronic catarrh in individuals of a lymphatic temperament, in dropsy, &c. Tobacco enema is administered with advantage in cases of asphyxia, strangulated hernia, or to destroy ascarides.

[My distinguished and valued friend, Dr. O'Beirne, of Dublin, has used it in tetanus with great success. Might it not be employed in transverse or cross births, when the infant is dead, and all other remedies have failed to tranquilize parturient action. T.]

EXTERNALLY, it is useful in fomentations in cases of dysentery: baths prepared with a decoction of tobacco leaves newly gathered are sometimes useful in tetanus.

INTERNALLY. *Infusion.* ʒ j—ij in ʒ vj of boiling water, to be taken at two doses, as an emetic. Not much employed.

Fowler's Infusion of Tobacco. H. of England.

Rx. Tabaci foliorum, ʒ ij;

Aquæ ferventis, ʒ iv.

Macera in vase clauso, per horas tres, cola et adde,

Spiritus rectificati, ʒ j.

Dosis, gutt. xx—xl quotidie.

In asthma and hydrothorax.

Wine of Tobacco. H. of Germ.

Rx. Tabaci folior. ʒ j;

Vin. albi, ʒ xij.

Macera per dies octo et cola. Dosis, gutt. v—xxx in vehiculo apto.

In certain cases of dropsy.

EXTERNALLY. *Decoction.* ʒ ij—Oij of water.

Employed as a fomentation in cases of scabies.

Huile de Nicotine. P. *In frictions, in the treatment of scabies, chilblains, indolent tumours, &c.*

Cerate of Tobacco. H. of Germ.

Rx. Succu tabaci,

Cera flavæ, ā ā ʒ iiij;

Picis, ʒ iss;

Olei olivæ, q. s.

Misce.

Employed in frictions in tetters, when there is not much inflammation.

Enema of Tobacco. Hot. D.

Rx. Tabaci foliorum, ʒ j.

Coque in,

Aquæ, Oij.

Cola et adjice,

Antimonii tartarizati, gr. xij.

Employed as an energetic stimulant, in asphyxia, &c.

Fomentation of Tobacco.

Rx. Tabaci foliorum, ʒ j;

Aquæ, q. s.

Coque.

The leaves are applied to the epigastrium as an emetic.

[I have known a tobacco leaf applied to a chronic ulcer of the leg excite violent vomiting, diarrhoea, and syncope. Tobacco water, or a decoction of tobacco is a common remedy, in Ireland, for mange in sheep, and for cutaneous diseases, the most obstinate or different. It is, however, rarely employed in human diseases. T.]

STRONG-SCENTED LETTUCE LEAVES.

Narcotic and diuretic. They are administered with success in ascites, enlargements of the abdominal viscera, jaundice, &c., and as a substitute for opium, in neuroses. Not much used.

INTERNALLY. *Extract.* P. Gr. ij—ʒj, and even ʒj, in pills.

Lettuce-Lactucarium. (Duncan).

A sedative which does not produce narcotism, like opium. It is employed in a great number of cases, even inflammatory to produce sleep.

INTERNALLY. Gr. ij—iv, and progressively to gr. x or xv, in pills.

CHAPTER XII.

MEDICINES PRINCIPALLY USED AS EMETICS.

TARTRATE OF ANTIMONY AND POTASS.

In large doses it is a violent poison; in small ones, an emetic and purgative; in moderate quantities, and if long time continued, it acts as a diaphoretic alterant. It is administered as an emetic in cases of gastric derangement, bilious fevers, &c. In very small doses, and dissolved in a large quantity of a proper vehicle, it is employed as a purgative; as a counter-stimulant, it is used with success in pneumonia, hepatitis, and other inflammatory diseases of the parenchymatous organs.

[It is also given in strangulated hernia, in nauseating doses, to diminish the action of the heart and muscles, and also to allay powerful uterine action in cases requiring version, after opium and depletion have failed. T.]

EXTERNALLY, it irritates the skin, and pro-

duces an eruption of pustules peculiar in their nature. It is consequently employed as a powerful derivative.

[It does not always irritate the skin, or cause an eruption, and in such cases the addition of four or six minims of croton oil, to each ounce of antimonial ointment, will render it effectual. The simple ointment may fail to irritate when applied to a certain part, though an eruption similar to that usually produced may appear upon a distant one. T.]

Subst. incomp. Concentrated acids, metallic acids of the second class, and their carbonates, the soaps, gallic acid, bitter and astringent substances, cinchona, rhubarb, &c.

INTERNALLY. As an emetic, gr. j—iv, in two ounces of tepid water, half a glassful of which should be given every quarter of an hour.

As a purgative, gr. j—ij in Oij of a vehicle (veal or herb broth), of which a glass should be taken every hour.

As a counter-stimulant, gr. iv— \mathfrak{D} j, and progressively to \mathfrak{D} ij in the 24 hours.

Wine of the Tartrate of Antimony. P. (3j contains a little more than gr. l of antimony). As an emetic, \mathfrak{z} j—ij. Not much used, [as gastric irritation or gastro-enteritis is so common to infants. T.]

As a diaphoretic, \mathfrak{z} ij—iv.

Potion émetique. P. To be taken in three doses, at an interval of a quarter of an hour.

Emetic Potion. H. of Germ.

Rx. Antimonii tartarizati, gr. iij;
Aque puræ, \mathfrak{z} ijss;
Oxymellis scillæ, \mathfrak{z} ss.

M. Half of this potion should be taken at once, and the remainder in spoonful every quarter of an hour.

Pulvis Emeticus Communis. H. of England.

Rx. Pulv. ipecacuanhæ, gr. xv;
Antimonii tartariz. gr. j.

Sit pulvis statim sumendus, et vomitu moto, bibat æger pocula infusi anthemidis, vel aque calidæ.

[This powder will frequently succeed, when its component parts have failed. This emetic may be given in a draught with syrup. T.]

Emetic Potion, or Eau Bénite. H. de la Ch.

Rx. Antimonii tartarizati, gr. vj;
Aque, \mathfrak{z} vij.

Misce.

A very violent emetic, employed in the treatment of painters' colic.

The *Potion vomitive* of the H. des Ven. contains only gr. ij of the tartrate of antimony, dissolved in \mathfrak{z} iv of a ptisan composed of hound's tooth and liquorice. It is taken at one dose.

Emetic Potion. H. of England.

Rx. Antimonii tartarizati, gr. j;
Pulveris ipecacuanhæ, gr. xv;
Aque menthæ, \mathfrak{z} xij;
Syrupi croci, \mathfrak{z} j.

Fiat potio in dosibus duabus capienda.

Lemonade Emetice. H. of Italy.

Rx. Antimonii tartarizati, gr. ij;
Sacchari, \mathfrak{z} ss;

Misce.

Dosis semicyathus omni semi-horâ.

As an emeto-cathartic.

Eau Minérale. H. de la Ch.

Rx. Antimonii tartarizati, g. iij;
Sodæ sulphatis, \mathfrak{z} ij;
Aque ferventis, \mathfrak{z} .

Liqua.

To be taken hot in three or four doses, at a quarter of an hour's interval. Employed in painters' colic.

[It is, perhaps, unchemical, but very efficacious. T.]

The *Potion emeto-cathartique* of the H. des Ven. contains only gr. ij of antimony, and \mathfrak{z} ij of the sulphate of soda, dissolved in Oij of veal broth.

The *Potion emeto-cathartique* of the H. St. Ant. contains only gr. j of antimony to \mathfrak{z} iv of a vehicle.

Potion Stibio-Opiace. H. of Paris.

Rx. Antimonii tartarizati, gr. j;
Opii pulveris, \mathfrak{a} \mathfrak{a} gr. j;
Gummi tragacanthæ, \mathfrak{D} j;
Aque folior. aurantii, \mathfrak{z} ij;
Aque fontanæ, \mathfrak{z} vij.

Misce.

Dosis cochl. min. singulis semihoris.

In intermittent fevers.

Potion Anticroupal. H. des Enf.

Rx. Antimonii tartarizati, gr. jss;
Syrupi ipecacuanhæ, \mathfrak{z} j;
Oxymellis scillæ, \mathfrak{z} ij;
Infusi polygalæ senegæ, \mathfrak{z} iv.

Misce.

Cochl. amp. pro dosi.

To facilitate the expulsion of the false membranes.

[This was very much employed a quarter of a century since, but seldom at present. T.]

Apozème Contro-Stimulant of Lacnæe. H. de la Ch.

Rx. Antimonii tartarizati, gr. vj;
Infusi foliorum aurantii, Oj;
Syrupi simplicis, \mathfrak{z} ij.

Misce.

Dosis \mathfrak{z} ij. tertiâ quâque horâ.

In acute inflammation of the lungs, &c.

Antimonial Emulsion with Camphor. H. of Germ.

Rx. Antimonii tartarizati, gr. v;
Emulsionis camphoræ, \mathfrak{z} x.

Misce.

Cochl. amp. pro dosi.

As a diaphoretic and alterative.

Antiphlogistic and Sudorific Potion. (H. of Italy).

Rx. Antimonii tartarizati, gr. vi;
Mellis despumati, ʒ ss;
Infusi flor. sambuci, Oij.

Misce.

Cyathum minimum pro dosi.

In rheumatic and gouty inflammations.

[Other Italian physicians use it in larger doses.

Rx. Aquæ, ʒ vj;
Ant. tart. gr. xiv;
Syrupi croci, ʒ ss.

Dosis ʒ ss secundis horis ad sextam vicem.

[It has been given to the quantity of a scruple, in repeated doses, in twenty-four hours. It vomits most persons two or three times, purges others, or excites copious perspiration, while more are relieved of pneumonia without any evacuation. The mortality is one in twenty-eight. A drachm of syrup of poppies is added to each draught containing gr. ij, every second hour. It is strongly recommended after one copious bleeding, by the Italians, Laennec, Forbes, Southwood Smith, Tweedie, Graves, and others. Twelve grains are generally sufficient, though twenty have been given in twenty-four hours. T.]

ANTICATARRHAL PILLS.

Rx. Antimonii tartarizati,
Opii pulveris, ā ā gr. iij;
Gummi tragacanthæ, gr. x;
Confectionis rosæ, q. s.

Divide in pilulas l, quarum capiat duas mane nocteque.

In chronic pulmonary catarrh.

EXTERNALLY. Gr. xij—ʒj on a burgundy pitch plaster.

Pommade Stibice, called *d'Antenrieth*. P. (ʒj—ʒj of lard). In frictions two or three times a day, as a rubefacient.

The *Pommade Stibice* of the H. de Paris contains ʒj of antimony to ʒj of lard; it is twice as strong as that of the Codex.

These pommades are used in frictions on the skin; and their use is continued until an eruption of pustules is produced. This manner of using this medicine is very beneficial in certain affections of the chest, hooping cough, spinal irritation, &c.

Rubefacient Lotion. (H. of Germ.)

Rx. Antimonii tartarizati, ʒj;
Aquæ ferventis, Oj;
Spiritus camphoræ, ʒ ss.

Misce.

Strengthening Collyrium. (H. of Germ.)

Rx. Vini antimonii tartarizati, ʒ ss;
Aquæ rosæ, ʒ iv;
Balsami Fioraventi, ʒ ij.

Fiat collyrium.

Employed in chronic ophthalmia.

Purgative Enema. H. of America.

Rx. Tartratis antimonii, gr. xx;
Solutionis acacie, ʒ viij.

Fiat enema.

SUB-HYDROSULPHATE OF ANTIMONY, OR KERMES MINERAL.

In doses of a few grains, an emetic, whose action is less to be depended on than that of the tartrate of antimony; in smaller doses, it acts as a stimulant on the lungs and the cutaneous surface. It is often used in cases of peripneumonia, chronic catarrh, humid asthma, &c. It is also recommended as a sudorific in cutaneous diseases, chronic rheumatism, gout, &c. It is employed by the counter-stimulists in the same cases and same manner as the tartrate of antimony, although, according to the observations of Laennec, it is less efficacious.

Subst. incomp. All acids.

INTERNALLY. As an emetic, gr. vj—x, suspended in a mucilaginous fluid.

As an expectorant, gr. ʒ—iv, in an emulsive potion.

As a counter-stimulant, gr. xij—ʒj, and even to ʒj, progressively.

Expectorant Powder. (H. of Germ.)

Rx. Antimonii hydro-sulphatis, gr. xv;
Sacchari purificati, ʒj.

Divide in chartulas xv, quarum capiat duas vel tres pro dosi.

Powders used in Hooping Cough. (H. de Montp.)

Rx. Antimonii hydro-sulphatis, gr. ij;
Ipecacuanhæ pulveris, gr. vj.

Fiant pulveres vi, de quibus capiat unum quartâ quâque parte horæ.

Powder of the Hydro-sulphate of Antimony with Camphor. (H. of Germ.)

Rx. Antimonii hydro-sulphatis, gr. ʒ;
Camphoræ pulveris, gr. j;
Sacchari purificati, ʒj.

Divide in chartulas duas in die capiendas.

Diaphoretic Bolus. (H. of Germ.)

Rx. Antimonii hydro-sulphatis, gr. vj;
Camphoræ, gr. viij;
Ipecacuanhæ, gr. viij;
Succi sambuci, q. s.

Fiant boli vj, quorum capiat unum tertîâ quâque horâ.

In catarrhal fevers.

Expectorant Bolus. H. of Italy.

Rx. Antimonii hydro-sulphatis, gr. viij;
Gummi ammoniaci, ʒj;
Oxymellis scillæ, ʒ ss;
Pulveris glycyrrhizæ, q. s.

Divide in bolos octo, quorum sumat unum secundâ quâque horâ.

(To be continued.)

ABUSES IN HOSPITALS AND DISPENSARIES

THE Hospitals and Dispensaries of this metropolis are numerous, but the great evil, as observed by Celsus, besetting them, is that the poor, for whom they were ostensibly and originally declared to be designed, derive, comparatively speaking, little or no benefit from them; because on their personal application, they will be refused admittance, however severe in mind or body their sufferings may be.

The Governors thereof are not apparently inspired by the divine sentiment, "Seek and ye shall find, knock and it shall be opened to you," as the place intended for the friendless and the needy suppliant, many of whom have seen better days, they too often allow to be occupied by the bloated dependants or servants of the wealthy*. In truth we here take leave to state that these Hospitals, so much boasted of, are not the ornaments of our country; because, like the poor-rates, they have their origin in want of wisdom, want of patriotism, magnanimity and generosity, in the application of the resources of a great people.

How much better would it be to encourage industry, by modifying the laws of entail and mortmain, by attention to our fisheries at home and abroad, by permitting the Hebrews to purchase land, by the cultivation of the soil, on a still greater scale; by which combined measures the poor-rates, amounting to eight millions annually, would be saved, as also the expenses of these hospitals, and by which line of conduct the industrious man, whether in health or disease, from having scope for the exercise of his talents, would be able to remain under his own roof, and in the bosom of his own family—a consolation above all estimation, and compared with which, a palace has no charms. Those institutions that benevolently contemplated the expanding the human heart and mind by education, like those for the relief of mental and bodily infirmities, have also in this metropolis frequently taken the same worthless direction. Before admission to the latter, with which we intend at present to deal, the sufferer, although the most marked object of compassion, must have the recommendation of a subscriber; and this the poor and the stranger have extreme difficulty in

* Unless the governors of Hospitals shall allow misfortune to be insulted by neglect, they should insist upon a Physician and Surgeon being constantly on duty. Hospital dressers, and restrictions as to visiting the patients, should be particularly attended to, in order to prevent the diffusion of contagion throughout the metropolis. It is highly probable that the small pox, of which Sir Peter Parker died, was conveyed from an Hospital, or a receiving room thereof, or a Dispensary, by those frequenting them.

obtaining*. I am well convinced that thousands, who are slightly afflicted in the first instance, have their maladies irretrievably increased in the running after a letter from a subscriber, which they either never obtain, or if obtained it is of no use, as the result of delay†. These are well known and disgraceful deformities in the Hospitals and Dispensaries of the metropolis, which never would have been established, had the Colleges of Physicians and Surgeons honestly devoted themselves to the performance of those duties which they owed to their fellow creatures and to their profession. Let us suppose the father of a family attacked with acute disease of the head, chest, or abdomen, and that he is poor and unknown, and unable to pay for his lodging and medical assistance. In this deplorable condition he attempts to procure a letter of admission to an Hospital or a Dispensary, and in making these efforts towards obtaining relief, the proceeds of his labour are lost to his family, and the delay adds to the violence of his disease, by which he is compelled to abandon his work and take to his bed. His wife is now left alone in this appalling struggle, and as the result of poverty and mental anxiety, she also becomes the victim of the unchristian system of our Colleges and Hospitals; and thus are the children neglected, while death and misery extend their direful and leaden hand over the devoted family. Scenes such as these have their origin in the want of judgment, honesty, and discretion, in the management of the funds of our Hospitals, which ought to be open to all men labouring under disease. But the applications of those so afflicted are of no avail; their language, the offspring of pain and misery, is not felt, as the institutions declared to have been consecrated to charity are, as observed, preoccupied by those for whom they were never intended to extend their aid, to the exclusion of the needy—and all this takes place in the capital of a kingdom that boasts its literature, its humanity, and its civilization.

* The insisting that a patient, before admission to an Hospital of the metropolis, however, urgent and dangerous his disease, should give security as to the expense of his funeral being defrayed, presents an irrefragable, a horrid, and disgraceful picture of the shopkeeper system ascribed to this nation by a man of extraordinary talents, but not a great man, because he had no generosity, but when such answered his views; however, had he known the sickening hospital arrangements of this capital, they would have placed his sarcasm beyond a doubt among Frenchmen, who are gallant and brave, and despise insensibility to the unfortunate.

† The Free Hospital is a noble exception to the letter hunting; poverty and disease are the passports to the benefits of that excellent institution.—ED.

The picture just drawn is by no means overstrained, but of daily occurrence, as thousands perish annually from the want of that relief which, if administered at an early stage, would have averted the calamities of neglect, and the families of the sufferers from becoming burdens to their parishes, and a disgrace to their country; and for such events the Colleges of Physicians and Surgeons have entailed on themselves a grievous responsibility.

We are all of us called on to practise gentleness, consideration, and benevolence towards our fellow creatures under affliction, whether these evils shall flow from the dispensations of the Almighty, or from other causes. It is not only painful, but truly awful, to behold men preaching morality, religion, and liberality, some of whom are, from their age, on the verge of eternity; yet influenced by a mean and sordid spirit, and determined as it were to die as they have lived, hypocrites, exerting every nerve, and winding up every spring of established power and prejudice, to prevent the blessings of improvement extending themselves to the medical profession, by facilitating the education of its members, and thereby benefiting mankind and the poor in particular. The observations of Pater Familias are an appeal to the medical profession, in favour of independent minded men, who are often doomed to circumstances so circumscribed, as to demand the most rigid economy; and I am certain the appeal will not be made in vain, as it may be found practicable to devise some plan to meet his views, which are, I believe, acted on in many parts of the continent, and particularly in Holland.

The medical practitioner who is anxious to rise in his profession, and the one who has acquired reputation, whether as a physician or a surgeon, is equally averse to inaction; and to those the suggestions of Pater Familias hold out inducements for consideration and reflection.

The Lawyer induces his clients to repair to his chambers; and it would contribute to the interests of the community, were this plan applied, on a more extended basis, to medicine than at present, which would conduce to early consultations, and thereby to the prevention of disease. It is by medical men having a resource of this kind at their own homes, that the views of Pater Familias can be answered; and in adopting such a course, the enormous sums raised for the support of Dispensaries will become available to the profession, instead of being beneficial to those who have no claim thereunto. No class of men have done more towards the interests of society, by their exertions in the prevention and cure of the bodily evils incidental to this life, as also by dispelling the clouds that envelope the human mind, than medical men, because the examination of the human frame, so fearfully and wonderfully made, leads to the conviction of a great

and first cause, intimately pervading man and matter—a knowledge not only inspiring humility, but identifying the medical profession in all ages, with mercy, generosity and benevolence—the purest streams flowing from the heart of man. Unfortunately, however, medical corporate bodies have disgustingly distinguished themselves in this interesting field, not only by an utter neglect and insensibility to the advancement of their profession, but against which they have been at all times ready to conspire*. Had these men been influenced by elevated considerations, instead of those of an unworthy and grovelling character, the medical institutions of this empire would have presented a picture the most perfect, and would have been resorted to by all the world for medical knowledge. I concur with Celsus in the propriety of avoiding such foul materials in establishing a reform that will be regarded as efficient. A faculty of medicine can alone do justice to the profession and the community.

I have the honour to be

Your obedient humble Servant,

PHILO CELSUS,

London April 21st, 1835.

To H. Warburton, Esq., M. P.

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The London Medical

AND

Surgical Journal.

Saturday, May 2nd, 1835.

THE LEGISLATURE AND THE PROFESSION.

THE enemies of medical reform are in high glee, on account of what they term the supineness of Mr. Warburton, in the great cause which he has so judiciously and ably managed; and they hope that nothing can be done during the present session of parliament. They cannot comprehend the reason why Mr. Warburton has not presented his report, though it is very easy to perceive it. That gentleman well knew the hostility of the late government to medical as well as to every other

* The labours of the immortal John Hunter, the miraculous efforts of a single mind, would have been consigned to destruction, had not the public and the profession poured forth their indignation against the barbarous and brutal negligence of the College of Surgeons, by which deed of negligence and envy they demonstrated themselves unworthy of public confidence.

useful reform; and he, as well as every friend to improvement, within and without the walls of parliament, was convinced of the speedy dismemberment of the late administration. This was expected daily; and it would have been extremely impolitic to introduce the important question of medical reform, which was certain of a fatal opposition from the late ministry, the avowed friends of collegiate, corporate, and all existing abuses. The times are changed, the administration which granted the parliamentary committee to inquire into medical education, practice, and abuses, is again steering the helm of state, and Mr. Warburton's most important measure is sure to be triumphantly carried, aye, and most probably during the present session of parliament.

It is highly amusing to notice the medical staff of St. Bartholomew's Hospital School in the race of reform, and to think of the intended improvements of the Rhabarbarians—doubtless spontaneous improvements, but such as were pointed out by at least 500 witnesses before the committee already mentioned. The medical world will therefore give due credit to such reformers.

The staunch friends of improvement in Pall Mall East and Lincoln's-inn Fields were perfectly mute, during the career of the short-lived administration lately defunct; but they will now of course resume their labours in setting their tottering houses in order, and appear in a few days among the other liberal and spontaneous reformers. There is no doubt but Mr. Warburton will estimate their sincere desire to be deprived of their privileges—it is so accordant with their past conduct. We tell them, however, they need not trouble themselves in proposing reforms, these will be effected without their good intentions or advice.

ESTABLISHMENT FOR TEACHING PRACTICAL LEGAL MEDICINE, ATTACHED TO THE UNIVERSITY OF BERLIN.

IN "Horne's, Nasse's, and Wagner's Archives," an account is given by Dr. Wagner of the above establishment, that has no parallel in Europe. Its title demonstrates the objects for which it is intended; but the report as given by Professor Wagner develops them more in detail.

The practical school of legal medicine in the university of Berlin, was opened in the summer session of 1833.

All the cases of legal medicine that have been met with in this city during the year, have been made applicable to the instruction of the physicians and students that belong to the establishment. The mode of teaching pursued is as follows:

At different hours of the day, according to the matter presented, each student is admitted in his turn to look into the cases of living subjects, to perform judicial post mortem examinations, and to analyse inorganic and inanimate substances; after which he is required to make a report on what has been submitted to him, in the same style as the district physician does. Moreover, the professor meets the students twice in the week, either for the purpose of explaining and discussing the facts already observed, or to distribute new cases among them; or lastly, to refute and pass judgment upon the reports that have been presented to him.

The students are exercised in the proper mode of examining adult and infantile corpses; and every one is aware how much practice and skill is requisite to appreciate the pulmonary docimasia of the latter. Every six months, a course is delivered on the modes of testing the presence of poisons, both mineral and vegetable; these modes the students practise.

The subjects comprised in medical police are included in this course of teaching. The students get an insight into every portion of this branch of judicial medicine, and a detailed explanation is given to them of all the instruments, apparatus, and collections that are necessary to its application. They are allowed to analyse alimentary substances and drinks, and the inspection of drugs is made by them in company and under the direction of a pharmacist.

A practical course of veterinary medicine is also connected with the objects of this establishment.

During the first year of its establishment (from July 1833 to 1834) the practical school of legal medicine has been attended by sixty-three students, some of whom are already in practice. The course of instruction has comprehended 253 medico-legal questions, 217 of which refer to living individuals, and 32 to dead subjects (judicial post-mortem examinations), and 4 required the analysis of inorganic substances.

The inquiries made into the cases of the living individuals turned, in 183 instances, upon the state of the body, and in 34 instances, upon that of the mind. Of the latter, 27 were civil cases, and 7 criminal.

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Hospital Reports.

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ST. GEORGE'S HOSPITAL.
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Ununited Fracture of the Humerus.

(Continued from page 538, of vol. 6, for November 22nd.)

IN No. 147 of our last volume, will be found the report of a case of fractured humerus, in a female of middle age, which had remained without any attempt at union during thirteen months, and which Mr. Keate had operated upon by re-section of the bones, at the period of our report. Five months have now elapsed since that operation was performed, and all hopes of union have long since vanished. Mr. Keate has for some time past endeavoured to

persuade her to submit to the operation, which he this day (April 23rd,) has performed; and which consisted in the introduction of a seton between the extremities of the bones. An incision was made of about two or three inches in length above the outer condyle of the humerus, nearly corresponding to the cicatrix of the former operation. The integuments and tissues were divided, and the ununited ends of the bone thus brought into view. Mr. Keate endeavoured to denude them as much as possible of the cartilage with which they were tipped, and then passed a long and strong needle, armed with a skein of silk, through the wound; passing it between the ends of the bones, and bringing it out at the posterior surface of the arm through the sound integuments. The wound was then dressed, and the two ends of the skein of silk tied.

This case, and another under the care of Sir B. Brodie, which was reported in our Journal for Nov. 22nd, and Dec. 20th, and which the pupils of this hospital have had an opportunity of studying during the present session, exemplify, in a striking manner, how little any of the plans yet proposed for remedying ununited fractures of the bones, are to be depended upon, even in the hands of such experienced surgeons as Mr. Keate and Sir B. Brodie.

Mr. Keate subsequently removed an ulcerated malignant growth from the mamma of another female, which did not, however, present any particularly interesting feature.

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WESTMINSTER HOSPITAL.
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Contraction of the Arm, from Cicatrices left after Phlegmonous Erysipelas, treated by Passive Motion.

— FLAMSTEAD was admitted into Burdett Ward, in January last, under the care of Mr. White, having the right arm permanently and rigidly flexed at the elbow joint, to such an extent, that the fore-arm formed little less than a right angle with the humerus. This contraction is dependant upon the presence of two cicatrices on the inner side of the arm. These have existed during the last two or three months, having been produced by a severe attack of phlegmonous erysipelas in July last. It appears that no incisions were made to allow of the exit of the matter which had formed, but the abscess was allowed to burst, and two very extensive sores were the result, leaving the ci-

catrices, which have produced the present affections. One of these cicatrices, which is of considerable size, is situated over the belly of the biceps muscle, and the other extends over the upper third of the fore-arm. The former of these is evidently confined to the integuments, which play freely over the subjacent muscle; but the other obviously extends deeper—is more corrugated—cannot be moved over the muscles below, and indeed, would seem to involve their aponeurotic coverings, and in an especial manner the bicipital fascia.

The ligamentous and tendinous structures surrounding the joint, having evidently become associated in the contracted state. Thus, the tendon of the biceps is plainly seen to be rigidly extended across the joint between the arm and fore-arm; and there is considerable shrinking and loss of tone in the muscles of the extremity, in consequence, no doubt, of the long continued state of inaction to which they have been subject; this is more particularly observed in the supinators and extensors of the fore-arm. The contraction, it appears, has existed ever since the formation of the cicatrices, but has gone on progressively increasing.

Division of the cicatrix was at first proposed for the removal of the contraction, but it was subsequently thought by Mr. White, on the suggestion, we believe, of Mr. Thompson, that a fair trial might advantageously be given in the first place, to the employment of daily passive motions, employed in such a way as is calculated to put the integuments and other structures on a gradual stretch. The plan which Mr. Thompson has directed the patient to pursue, is the following. The upper arm is in the first place to be securely rested upon a table, and a mass of lead, the weight of which is from time to time to be increased, is to be supported by the palm of the hand, when the extensor and flexor muscles of the fore-arm are to be called into play alternately; and this is to be kept up twice in the day, for from a quarter to half an hour at a time.

Feb. 18th.—He has used the weight as directed, with considerable advantage, during the last week, the angle of flexion of the joint having already become much more obtuse.

23rd.—He complains of pain in the elbow-joint, from the use of the weight. The arm, however, gradually becomes further extended, and he has now much more power over the fingers.

March 14th.—Considerable amendment has ensued since last report.

21st.—Very decided improvement has now taken place; the arm is extended to a much greater extent, and as a consequence, he has recovered the use of it in a variety of ways, of which he had previously been deprived. Thus, he can now bring a cup to the mouth, and touch

the crown of the head; the motion of the elbow-joint is free and unattended with pain; he likewise is speedily obtaining more command over the fingers.

April 8th.—A very obvious improvement continues to take place; the angle formed by the flexion of the arm becomes more and more obtuse, and the motions more and more readily executed; supination, which he could not perform upon his admission, can now be readily produced.

21st.—Since last report, he has gone on progressively improving; he has increased the weight of the mass of lead which he uses, to about seven pounds. He leaves the hospital to-day; and although he has not entirely lost all traces of the contracted arm, yet there can be but little doubt, that by the use of the same means for a little longer time, he will ultimately do so.

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NORTH LONDON HOSPITAL.

Traumatic Gangrene.

MARY PULLEN, aged 62, of intemperate habits, was admitted March 23rd, under the care of Mr. Cooper, having been run over by a heavy cart. She says she is subject to fits, and thinks she must have fallen down in one when the accident happened. The wheel appears to have passed, but partially, over the leg, as there was not any fracture; there was, however, a very extensive lacerated wound of the integuments and fascia, commencing at the internal side of the insertion of the ligamentum patellæ, and extending obliquely across to within an inch of the external ankle. The skin and fascia were separated from the muscles only to a small extent on the outside, so as to expose them as far as the edge of the peroneus longus, but on the inside, the separation of the skin extended back as far as the centre of the gastrocnemius. There was also another wound, about four inches long, obliquely across the popliteal space, also through the skin and fascia. Her appearance indicated an abused constitution, and she was in a state approaching to collapse. There was no hæmorrhage from either wound. The larger wound was immediately brought together by interrupted suture, and moderately warm fomentations applied to the limb. She was ordered a grain of the muriate of morphia directly, to be repeated in the night, if necessary.

24th. Passed a restless night, not having slept till this morning, although the morphia was repeated four hours after the first dose. Pulse 90. Tongue clean, but rather dry; bowels confined, skin cool; complains of much pain in the leg. Very little change has yet taken place in the appearance of it; two of the sutures were removed to day.

Hydrarg. submur., gr. iv. statim.

Haust sennæ horas duas post pil. sumend.

Half a grain of muriate of morphia every eight hours. The pulse got rather stronger in the evening.

25th. On examining the limb this morning, it was found that gangrene had taken place in the integuments implicated in the injury. The skin on the inner side of the leg where it was most separated, had become quite black, and on the outer side it had a mottled appearance. All this occurred during the night; there was not the slightest appearance of it last evening. Pulse 126; very small, weak, and slightly irregular. Tongue clean, but dry, bowels open; the features were collapsed, and the countenance extremely anxious. She was slightly delirious.

Vini rubri, $\frac{3}{4}$ iss. immediately; and $\frac{3}{4}$ s. every half hour afterwards.

At 12 o'clock Mr. Cooper, Mr. Liston, and Dr. Mott of Philadelphia (who happened to visit the hospital to day) met in consultation, as to the propriety of amputating; this was not, however, deemed advisable. To continue the wine, changing it for brandy every second time. She is gradually sinking.

26th. Still sinking; the gangrene has extended half way up the thigh; she died at 9 this evening.

Section Cadaveris—16 hours after death.

On examining the leg, the gangrene was found not to extend deeper than the skin and fascia, except in one spot, where ecchymosis was observed on her admission. The muscles above the knee were implicated. The foot remained perfectly healthy and natural. The femoral artery was found diseased, not ossified, though approaching to that state. In the abdominal aorta several portions of ossific matter were deposited. The saphena vein shewed marks of recent inflammation, and thickening on its internal surface. The internal surface of the femoral vein was also discoloured, though in a less degree. The brain was then examined, to account for the fits. Great thickening of the arachnoid was found, with considerable effusion under it.

Remarks on the use of Oiled Silk and Warm Water dressing. By Mr. Liston.

The plaster used by Mr. Liston to recent wounds, such as after amputations, &c., is composed of a spirituous solution of isinglass, spread over oiled silk; the solution is spread, when hot, on strips of the silk, and applied immediately. After amputations, the strips are used of considerable length, so as to give support to the flaps, and an interval is left between each, to allow the escape of matter, should adhesion not take place. Mr. Liston has used it for some years, and has found it to succeed in almost every case. It is easily applied, does not heat the limb, as the usual mode of dressing does, is easily removed in case of secondary hæmorrhage, allows the escape of offensive matter, and prevents the

factor attending the confinement of the discharge; often the wound does not require a second dressing, and the plaister frequently supersedes the necessity of a bandage. The use of warm water dressings, as employed by the same surgeon, consists simply in pledgets of lint, the size of the ulcer, dipped into warm water, and applied to the part, a piece of oiled silk a little larger being placed over it to prevent evaporation. It is found, in some cases, quite effective without the assistance of any other remedy; occasionally some slight astringent, such as a weak solution of sulphate of zinc or copper is indicated.

Both dressings are cleaner and less painful than any other; the last does not require a sponge; indeed, there have been no sponges used in the hospital for some time, except during operations. Mr. Liston said he had dispensed with them at Edinburgh, as he had seen the indiscriminate use of the same sponge by the various patients, attended with the worst consequences. It was often the cause of the spreading of one description of ulcers, of a malignant character, through the wards of the hospital.

It is not for the medicinal use of the water, as stated by a late writer on the subject, that this dressing is applied, it is in place of a poultice. It is by no means a novelty: many surgeons in the army and navy have employed it for years with success.

GUY'S HOSPITAL

Ossification and Ulceration of the Cartilages of the Larynx, with Fistulous Opening.

GEORGE BLACKGROVE, æt. forty-eight. During the former part of his life he was employed in some iron-mills, and was accustomed to drink spirits freely; but his habits lately have been temperate. He received a severe burn on the head five years ago, which healed very slowly (in twelve months), and reduced him considerably. After that, his occupation was changed, and he worked in a tan-yard, where he was much exposed to damp and cold; the early consequence was an abscess which formed behind the left ear, and proved as troublesome as the burn: after having been a patient at several public institutions, he was at length cured in fifteen months. For the last four or five weeks, his health has not been so good as usual; and, fourteen days ago, he had a small swelling, attended with pain, on the left side of the larynx, followed successively by two on the opposite side; they all burst, and discharged much. Four days before his admission, he noticed a hissing sound proceeding from the ulcer on the left side, and he coughed almost incessantly for about two days: at last he applied for relief at the hospital as an out-patient. He was admitted to the house

the following day, January 3rd: and on examination, a large portion of the cricoid cartilage on the left side, and of the thyroid on the right, was found ossified and denuded: there was a fistulous opening through the crico-thyroid membrane, through which air passed very freely while speaking, and generally without giving pain. He states that six months ago he strained himself while carrying a heavy weight, and that his throat has always been uneasy since.

Local applications, and those of a very mild nature only, were applied for several days; on the 7th January, Mr. Key ordered him Iodine gr. ss.; Potass. Hydriod. gr. iij.; Syr. Papav. 3 ss.

10th. His appetite, which was deficient when he was admitted, is increased; the ulcers somewhat improved, appearing less inclined to extend.—Pergat.

19th. Mr. Key attempted to remove a portion of the cricoid cartilage, but found it firm.

16th. His health and appearance are both much better: he requested a more plentiful diet, which was allowed him. A small portion of the cricoid cartilage was removed.

20th. He was ordered, as a gentle stimulant, a lotion of very dilute nitric acid (gtt. ij. ad 3 j. aq.); but, by mistake, he applied some pure acid, which was in the ward. This destroyed the integuments to some extent, but does not appear to have affected the cartilage.

21st. The ulcer is much inflamed. No ill effect followed the application of the acid except the extension of the ulcerating surface. Bread poultices were applied, and the iodine continued.

23rd. His throat is much better; he cartilage appears quite firm, and the ulcers on the right side cicatrizing.

28th. The smaller ulcer on the right side healed. One bare spot of cartilage can be felt by the probe, in the larger one on the same side. The opening in the larynx on the side smaller.—Pergat.

The opening was closed on the 12th of February, and he left the hospital quite well about three weeks afterwards. He suffered no inconvenience from the iodine.

Foreign Medicine.

Curious Case in which Sand and Gravel Stones were found in the Trachea after drowning.

C. F. H., aged 23, had been subject to epileptic fits since October 1830, with intervals of a week or a fortnight. On the 5th of May 1833, he was found dead in a rivulet; his face downwards, the head covered with the water, which was not a foot deep, and which therefore did not cover more than half his body.

On examination of the corpse, the most remarkable thing found was a quantity of sand and gravel stones of various sizes, in the trachea, below its bifurcation into bronchi; the largest of these stones was square, weighed at least a drachm, was half an inch long and broad, and half a line in thickness. It is almost impossible to conceive how this stone, which resembled others on the bed of the rivulet, could have passed through the glottis. A great quantity of the sand filled the bronchi, and some of it was even found in the pulmonary vesicles: the whole quantity of sand found weighed between three and four drachms.

This is an exceedingly rare case: Orfila mentions only one such out of 50 cases of drowning (Dict. de Med. t. 20, p. 26). The size of one of the stones, which exceeded the capacity of the glottis, proves that it could not have entered the trachea by a mere mechanical descent after death: but it renders it probable that it had been swallowed in the last moments of agony.—*Medicinisches Correspondenz—Blatt*.

Sudden Tumefaction of the lips after Fright.

M. Diez was called to Madame G., aged 24 years, of an hysterical habit of body. He found both lips, but especially the upper one, swollen and ready to burst. As this tumefaction extended to the gums and tongue, the patient could scarcely speak, and could only imbibe fluids. She complained of pricking pains, and sense of extreme tension in the affected parts. The swelling had risen in the space of five minutes, and was visibly on the increase. Besides, there was a copious flow of saliva, the respiration was short and quick, there was a sensation of sinking and fear at the chest, dry cough, shiverings, frequent and full pulse, head uneasy, though not aching, face red.

The cause of this disturbed state was a fright, induced by seeing a little girl four years old pass the blade of a penknife between its lips, without, however, wounding them. She said, that at the moment she experienced an excessively painful sensation in the lips, as if they had been wounded by some cutting instrument; and it appeared to her as if her circulation and respiration had been entirely suspended. Previously she was in comparatively good health.

Repeated applications of leeches, cooling lotions and aperients, reduced the swelling in four days, after it had extended to the eyelids; the cough, ptyalism, and difficult respiration, also ceased.—*Ibidem*.

Hæmorrhage from the Genitals of an Infant.

A young woman was delivered of a child which exhibited nothing anormal during the three first days. At the end of that time some blood was observed to proceed by drops

from the genitals. In a few hours this ceased, and a watery discharge followed. On the fourth day some drops of pure blood flowed, but, as before, soon ceased. The fluid had some resemblance to the catamenia. Five days after this hæmorrhage, the mammae tumefied without being inflamed. The child then completely recovered and passed quiet nights.—*Ibid.*

Aneurismal Dilatation of the right Cavities of the Heart, with Gangrene of the Skin.

A milliner, 26 years of age, who had been affected with syphilis two years before, and a year previously had suffered from puerperal fever followed by amenorrhœa, was seized in July 1832, with painful cough, debility, emaciation and nocturnal sweats. On entry to the hospital, the beats of the heart were found to be tumultuous, and to extend from the right side of the chest to the under part of the shoulder, and covering the respiratory murmur. The patient could not lay on the right side. All these symptoms announced an aneurismal dilatation of the right cavities of the heart, with affection of the valves. Digitalis with tartrate of potass was given, then borate of soda and aloes, by which the general condition of the patient was ameliorated, and she quitted the hospital on the 23rd of September.

She returned on the 3rd of November in a state of extreme emaciation and debility. Together with the symptoms of cardiac disease, there was a gangrenous condition of the skin, which first shewed itself on the edge of the left ear, and formed an eschar half an inch long, and several lines broad. It then successively shewed itself in both zygomatic arches, on the chin, the alæ nasi, the left arm, particularly at the elbow, and on the feet, which were also œdematous. Around these sphacelated plates, red spots like petechiæ, were observed. The plates themselves were insensible, but all around was acutely sensible, and the sense of heat extreme; there was intense head-ache, and she complained of a bad odour in her nostrils. The pulse was calm; the sclerotica blue. (Decoction of bark; lemonade for ordinary drink; pyroligneous acid to the sphacelated spots). The eschar on the ear, as also the other smaller ones about the body, gradually fell off: one on the left cheek was converted into a superficial ulcer. As the vinegar failed to calm the burning sensation, recourse was had to the chloruret of lime in ointment, which was also used to disinfect the nose: it is remarkable that while the stimulating remedy was easily tolerated, milder applications, as linseed oil, or white of egg, occasioned intolerable smarting. By degrees the sphacelus totally disappeared, and as her general powers rallied, the symptoms about the heart diminished. On the first of February 1833, the

patient left the hospital. The treatment had consisted of cinchona, acid elixir, and sulphate of iron.—*Ibid.*

Epitioraphia, a new Operation for the Cure of Prolapsus Uteri.

Dr. Frick thus denominates the operation of excising a portion of the labia majora, and uniting the edges by first intention. The stitches are only introduced along the lower half or two thirds of the vulva, in order that space may be given for the passage of the urine and menses: Dr. Frick says it may even allow of the venereal act, but this is scarcely compatible with the intended support of the uterus. Should pregnancy occur, a small incision would permit the exit of the child. The operation may occasionally supersede that proposed by Dr. Hall and Mr. Ireland namely, producing a contraction of the vagina.

College of Physicians.

At the College of Physicians, on Monday night, Dr. George Gregory read a paper on the mutual relations between small-pox and cow-pox. He considered the vaccine virus had lost its virtue, and that it was necessary to procure some fresh matter from the original source.

The Poor Law Commissioners.

We have received several communications from different parts of the country, complaining of the arbitrary conduct of the Poor Law Commissioners, respecting medical appointments to parishes. They first unite several parishes, and then appoint a surgeon, not a resident in the district, but some inexperienced young man brought down from London, the protégé of some one of themselves. This plan is injurious to the poor, and unjust to the resident medical men of such districts. The poor are entitled to the best advice and care, which can only result from great experience, and rarely from those who are about to enter upon the practice of the profession. It is also manifestly unjust towards local surgeons, if legally qualified, to have juniors made their rivals by a Board who are morally bound to better the condition of the poor, which is not done by appointing inexperienced medical attendants.

The Plague in Egypt.

Ten thousand persons have died out of 19,000, who, up to the 23rd of March, had been attacked with this disease.

Maize.

After repeated experiments, M. Pallas has procured a chrystalized sugar from Indian corn stalks; it bears a great resemblance to that extracted from beet-root.

New Process for Purifying Benzoic Acid.

Dissolve the acid in four or five times its weight of sulphuric acid, diluted with six parts of water. During ebullition, add a very small quantity of the purest animal charcoal, filter it, and while cooling, the acid will separate in crystals. Should long beautiful needles not be found, and should it still possess an odour, the operation must be repeated. Collect the crystals on a filter, remove the sulphuric acid by washing, and leave them to dry in the shade. Sulphuric acid dissolves the resin and oil, which render the benzoic acid impure.

To have this acid in beautiful crystals, dissolve in alcohol that which has been previously purified, and put the solution in a subliming apparatus, placed in a sand bath. Manage the fire in such a manner that the alcohol alone shall be volatilized, and long needles, perfectly white, and without odour, will be obtained. (*From the Gazette Eclettica di Farmacia.*)

The Apothecaries' Garden at Chelsea

Opened on Monday, when Professor Burnett gave his introductory lecture, which will appear in our next. Twelve beds have been laid out to illustrate the natural system: this is an improvement; but reform is the order of the day—it has reached even the directors of Rhubarb Hall—what is the cause? Is it to be found in the fears of the Rhubarbarians that their Hall and regulations would be found useless in the remodelling of the profession?

Serious effects of the Retention of a Thread of Lint in a Wound.

A girl had the right leg cut against a sharp stone; the wound was superficial, and

was dressed with charpie soaked in vinegar and salt water. The wound healed in three days. On the 10th day, she awoke in the night with excruciating pain of the leg; the whole thigh was burning hot, and in the morning she was found with suffused, turgid face, intense fever, rapid pulse, hot skin, head-ache, dragging sensation in the leg, partial delirium, leg swollen from the groin to the ends of the toes, and of a purple colour around the cicatrix of the wound. The wound was opened, hot fomentations applied to the leg, cold water to the head, she was bled, and purged with clysters. The pain ceased upon the application of the fomentation; and on the 12th day after the first accident, a rather large thread of lint was taken out of the wound. At noontime of the same day all the symptoms disappeared, and the wound again readily healed in a few days.—*Heidelberg's Klinische Annalen.*

CORRESPONDENTS.

Londonensis.—We shall insert the letter if the writer convince us that the facts are strictly true, and can be proved in a Court of justice.

Mr. Dyer's communication is too late for this Number.

A Borough Student.—Our Correspondent should have paid the postage. We know nothing of him or the matter about which he writes, nor do we notice advertisements in the body of this work. We published the Lectures as they were, if not satisfactory, the fault is not ours. We advise him to peruse Williams on Auscultation.

WEEKLY METEOROLOGICAL JOURNAL.

1886.	M	Thermom.			Barometer.		De Luc's Hygrometer		Winds.		Atmospheric Variations.		
Apr.													
23		55	57	50	30.20	30.17	48	48	N.N.W.	N.N.W.	Fine	—	—
24		52	59	48	30.12	30.12	48	49	N.W.	N.W.	Cloudy	—	—
25		50	54	41	29.90	29.84	49	47	W.	W.S.W.	Fine	—	—
26		44	49	36	29.56	29.54	47	48	N.W.	W.N.W.	Cloudy	Snow	Snow
27	☾	40	49	35	29.38	29.47	48	47	N.	N.E.	Fine	Fine	Fine
28		45	52	41	29.56	29.62	48	56	N.E.	N.E.	—	—	—
28		44	48	42	29.49	29.46	67	66	N.E.	N.N.E.	Rain	Rain	Rain

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All communications and books for review are to be addressed (post paid) to Dr. Ryan, 4, Great Queen-street, St. James's Park, Westminster; or to G. Henderson, 2, Old Bailey, Ludgate-hill.

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SATURDAY, MAY 9, 1835.

VOL. VII.

LECTURES
ON
MEDICAL JURISPRUDENCE,
DELIVERED BY PROFESSOR A.T. THOMSON,
F. L. S.,
At the University of London; Session 1834-35.
LECTURE XXVIII.

Drowning.

GENTLEMEN—Another cause of death by asphyxia is DROWNING. Man, like other warm-blooded animals, is furnished with respiratory organs adapted only for breathing air in its gaseous state; submersion, therefore, in water becomes a cause of asphyxia, and the mode of death from this cause, or *drowning*, is one of those which lie within the scope of our inquiries. The immediate cause of death by drowning, as in every other instance of asphyxia, is the paralysis of the brain and nervous system, from the circulation of unaltered blood in the head: but, in many cases, the effect is not so complete as to preclude the possibility of resuscitation, by endeavouring to restore the pulmonary circulation, and again supplying the system with arterial blood.

In forming a decision with respect to the causes of fatal asphyxia, from *drowning*, difficulties present themselves, which can only be cleared away by strict inquiry into the state of the person previous to the submersion, to accidents which may have happened to him in falling into the water, to the period of the day at which the submersion is supposed to have happened, and many other circumstances. The chief object of these inquiries, in a medico-legal point of view, is to ascert—

1. Whether a person who is found dead in a lake, river, or in any piece of water, was submersed, or drowned, whilst alive, or thrown into the water after death.

2. If any marks of violence appear upon the body; whether these marks were inflicted before submersion, or happened from accidents attending it.

3. Whether, independent of marks of vio-

lence, the drowning was the effect of accident, of suicide, or of murder.

1. The first question can only be answered by examining into the phenomena attending the act of drowning, of a healthy individual, in the possession of all his faculties, who accidentally falls into deep water: and the appearance presented on the inspection of the body by dissection after death.

If the fall have been from an height, the body is precipitated to the bottom of the water, when it is not of profound depth; but it quickly rises to the surface, partly from the natural gravity of the body, whilst the lungs are full of air, being less than that of the water, partly from much air collected and retained in the clothes. But if the person be not able to swim, and greatly agitated, he screams; by which effort the chest is partly emptied of the air it contained, and the body once more sinks to the bottom, but again rises; and this occurs several successive times. Whenever the mouth happens to be above the surface of the water, the necessity for fresh air in the lungs, instinctively leads to a hurried gasp to obtain it: but, frequently, water is gulped down with the air, which exciting a cough, the air is ejected as well as the water, and the body again sinks. Repeated efforts of this kind, and vain struggles for safety are made, every time the body rises; but, as the air in the lungs becomes more and more tainted, at each successive submersion, and, at the same time, the efforts made to avert the impending fate, determining the blood to the head, and this being unaltered or venous, asphyxia supervenes; consciousness and volition having then ceased, the body sinks motionless to the bottom of the water, the weight of which, pressing on the thorax, forces out a portion of the air remaining in the lungs; and a few air-bubbles, gurgling to the surface, afford to those present the evidence that the last vain effort is over. In accounting for these phenomena, it is evident that the frequent risings to the surface depend, in a great measure, on the struggles which are, instinctively, made to fill the lungs; and, the subsequent sinkings, to the air thrown out from the lungs, owing

to the various efforts to inspire taking water in with the air, and this exciting coughing. As the air within the lungs diminishes, it also becomes more and more venous; the skin changes to blue, particularly about the mouth; the pulse becomes weaker, and ceases; muscular energy is gone; and, like an inanimate substance, the body falls motionless and without sensation. The more the individual struggles, the sooner he dies, and the less chance of resuscitation exists: for it is the muscular motion which expends the oxygen: a fact which is proved by the effect produced on persons who have fainted, and in that state have been submerged in water: for in this case a much longer period of submersion can be sustained without destroying the chance of resuscitation. Foderè relates a case from Plater, of a young woman who was condemned to be drowned as a punishment for the crime of infanticide, and who fainted at the moment she was plunged into the water. She remained a quarter of an hour under it, and, nevertheless, recovered on being drawn out. This may also explain some of the extraordinary instances of recovery recorded in the reports of the Humane Society. One person is stated to have recovered after having been three quarters of an hour under the water.

Now, if the body has been drowned while living, what appearance does it exhibit when taken out of the water?

The whole body is cold and pallid; the face especially; the eyes are half open, and the pupils much dilated; the mouth and the nostrils contain a good deal of frothy fluid; the tongue is protruded between the teeth, and approaches to the under edge of the lips. It is said that the countenance, instead of being pale, is sometimes red and bloated, and presents all the symptoms of death from ordinary apoplexy, but I have never seen an instance of this condition, although I have seen the head much swelled. This swelling and lividness are generally present, when persons have fallen into the water in a state of intoxication. In addition to these external appearances, the ends of the fingers are seen to be excoriated, and the presence of dirt or sand is visible under the nails; but this can only happen when the water is not very deep, and when efforts to save himself from death are made by the drowning person on touching the ground: if the water be deep, however, the body never reaches the ground till all power of struggling is over; and a drunken man who falls into the water may expire without a struggle or an effort to save himself: thence this last sign cannot always be expected to be present.

The appearance which the body that has been drowned presents, if immediately opened, are the following.

On opening the head, the brain displays a darker colour than usual: but the vessels are not always turgid with blood: extravasation has never been observed in cases of simple drowning.

2. There is an unusual accumulation of black blood in the pulmonary arteries and veins, and in the right auricle and ventricle; whilst the left ventricle is only half filled with the same kind of blood—sometimes completely empty. The trunks and smaller branches of the arteries proceeding from the left ventricle are also filled with black blood.

3. Some water, mixed with frothy matter, and occasionally coloured with blood, is found in the trachea; but the quantity varies much in different instances. Much useless controversy took place upon this subject, until the experiments of Dr. Goodwyn set the question at rest. By drowning animals in a coloured liquid, he found that the quantity of fluid which enters the lungs was too small to cause death; for, although water injected into the trachea in moderate quantity causes some difficulty of breathing, and a feeble pulse, yet it is quickly absorbed, and does not cause death.

It is curious that so late as 1809, Larry should have attributed the cause of death in drowning to the introduction of water into the bronchiæ; and deduced this conclusion from anatomical examination of the bodies of persons who had been drowned. I may only repeat that the question is now set at complete rest; unless the body have remained long in the water, scarcely any water is found in the bronchiæ; and consequently, much of that which is found passes in after death. As to the quantity, this depends on the fact whether the last effort of the lungs of the person who falls into the water be one of *expiration* or *inspiration*; for, if it be the former, no water will reach the trachea. The frothy mucus in the trachea, however, is not peculiar to drowning:—you will recollect that I mentioned it as one of the signs not unfrequently present in cases of hanging: and we shall afterwards find that it is also present in cases of death from irrespirable gases. The frothy mucus, nevertheless, is a sign of some importance; for if the body be thrown into the water after death, unless the death of the person has been effected by strangulation or hanging, no frothy mucus is found in the lungs; and water entering the trachea of a dead person can never so mix with the air as to form a frothy mucus.

4. The diaphragm is said by some to be depressed into the abdomen, which would not *a priori* be expected. The experiments of Mr. Brodie have proved, that the diaphragm exerts itself nearly as long as the heart itself, and that the interval between the cessation of the movements of the diaphragm, and that of the movements of the heart, is even shorter in animals that are drowning, than in those of the throes of strangulation; thence the last efforts of life being those which aim at respiration, this position might be arrested as it were at the moment of death: but the fact is generally the reverse; and as the last efforts are those of collapse of the lungs, the diaphragm rises high into the thorax.

5. Little or no water is found in the stomach ; and when it is present, it can in no way have contributed to death : and there is even less chance of water being found in this organ, if the body have been thrown into the water after death. This fact, and that of little or no water entering the lungs, cannot be too widely propagated, as the popular prejudice is in favour of the opposite opinion, and bodies taken out of the water are still rolled in barrels and held up by the heels in order to dislodge it : a practice fraught with the greatest danger, if the smallest chance of resuscitation continue.

A curious instance of the pertinacity with which old opinions are adhered to, is found in a paper of Mr. D. Johnson, Surgeon, Torrington, published in the *London Medical Repository*, for July, 1824. In detailing a case of suspended animation in a seaman who had fallen from a yard-arm into the sea, when the ship was going at the rate of nine knots and a half per hour, and was afterwards picked up in an insensible state—Mr. Johnson says, “When brought on board the ship he shewed no signs of life. I had him immediately suspended with his head downwards, and well shaken for a minute or two :” he was then laid on the cabin table, and rubbed all over by two or three men, with flannels, &c. Tartarized antimony was rubbed into the root of his tongue, and tobacco smoke blown into his mouth and nostrils, &c. Singular as it may appear, after all this, the man recovered.

Such being the appearances of the body of a person submerged in water whilst alive, and the aspect of the viscera displayed by dissection, let us now inquire in what respect these differ from those displayed in a body which has been previously killed and thrown into the water after death.

In the first place, something must be endeavoured to be learned from the state of the body when found. If the clothes be much torn, as if a struggle had taken place with another person, and marks of violence be perceived, which are not likely to have been inflicted under water ; if there be no excoriation at the ends of the fingers, and no dirt or sand found under the nails ; if any mark, as of a cord, be perceived around the neck ; if, instead of being pale, the entire corpse appear covered in various parts with ecchymosis ; if, on opening the body, the surface of the brain be not found darker than usual ; if the lungs be not gorged with blood ; if the diaphragm be in a state of natural tension ; and if the blood be in a coagulated state ; there is much reason for supposing that the death of the person was not the result of his submersion in the water. Circumstances, however, may throw doubts upon the validity of such decisions ; and, therefore, they ought to be examined into. Thus, the clothes may be torn from the nature of the bank or spot from which the individual precipitated himself, by catching upon stumps

of trees, or rugged-pointed rocks in the descent ; and this will also account for some external bruises. The nature of the bank must therefore be examined ; and if there are foot-marks indicating a struggle ; if the hands be clenched and contain grass or twigs, as if they caught at these to resist being precipitated into the water, then the first opinion, if confirmed by the additional symptoms on dissection, remains unaltered. With regard to the excoriations at the ends of the fingers, and the dirt and sand under the nails, I have already stated that these are not likely to occur if an intoxicated person fall into the water, nor if the water be very deep ; and it has also been suggested that the presence of these marks is no proof that the person was drowned alive ; since in a struggle by which he may have been previously killed, his fingers may have received bruises from catching at the ground or at grass, or other things at the moment he was murdered ; and these appearances may thus occur, even when the body has been dead before it was submerged in the water. Some marks of violence are not equivocal ; for instance, those indicative of hanging or strangling, upon the neck ; those inflicted by cutting instruments or gun-shot wounds but contusions, fractures, and luxations may arise from the nature of the bank whence the person was precipitated ; the rapidity of the current and the nature of the channel of a river ; whether it contains stakes in its bottom ; whether mills are erected on its banks, or other causes likely to produce marks of violence. Dr. Gordon Smith mentions a cause of dislocation which would scarcely have been previously suspected. A man who had previously leaped from each of the bridges into the Thames with impunity, undertook to do so again for a wager, but was drowned ; and when the body was found, both arms were dislocated. On investigating the cause, it was ascertained that he had, previously, always plunged with the arms in a line with the body, or perpendicular above the head ; but in the last instance, he went down with them in a horizontal position, and both were dislocated. With respect to the liquidity of the blood, it must be recollected that the blood does not coagulate in poisoning by some of the unrespirable gases. The darker appearance of the surface of the brain than is usual, without the gorged state of the vessels, and the defect of any extravasation, is a symptom much to be depended upon.

I have insisted upon those appearances that tend to render the ordinary signs of drowning, when a person is alive, doubtful, because cases daily occur in which decisions are hazarded on the most careless and slight examination of the body, both as regards its external appearance, and that which is presented on the post mortem examination of the viscera.

And after all, a clever barrister might easily puzzle a medical evidence upon the points of demonstration which really entitle him to

pronounce that a body found in water had actually died by drowning. Perhaps it may safely be affirmed, that no circumstances are likely to enable a complete decisive opinion to be delivered on the negative side of the question, that is, that the body was dead before it was consigned to its watery bed.

A body may be found, in which, although from not being taken out of the water, no suspicion may at first arise that the death was caused by drowning; yet, on examination, this may be found to be the case. If, however, marks of strangulation appear, we must hesitate in delivering such an opinion, until the most minute investigation be made. Thus, in a case published in the *Times Newspaper*, of the body of a boy having been found in a field in a sack, two medical practitioners, Mr. Smart and Mr. Saunders of Cheshunt, stated on the inquest, "that, upon examination, they found several marks under the chin, occasioned either by a cord or the pressure of hands. There was a fracture on the skull; the skin on the shin bones was broken, and blood had evidently flowed from the nostrils: there was also a wound in the cheek. The gentlemen both agreed that the body had been immersed in water; and that suffocation, together with the injuries on the body, had been the cause of death." Now, from the perusal of this account, it is pretty evident that there was sufficient reason for the opinion that murder had been committed; but it is difficult to conjecture upon what data it was supposed that the body had been immersed in water. If it arose from the body being wet, an easy solution of that circumstance might be afforded by the length of time the body had remained exposed to the atmosphere. No rational object could be served by immersing the body in water, and then removing it from the water to leave the sack containing it in a field, where discovery would be more likely to occur, than if it had been left in the water; and assuredly the extent of the violence evident on the body was amply sufficient to account for the death of the boy, without calling in the aid of drowning.

The replies to, and observations made upon the first question, are in a great measure applicable to the second, whether in the event of any marks of violence appearing upon the body, these were inflicted before the submersion of the body, or happened from accidents attending it. The only additional remark which I will make on this point, refers to the state of the lungs, which, as I have already stated to you, are distended with air, when death is the result of strangulation or of hanging; but very little air is contained in them when a person has died by drowning. Dr. Paris, in his joint work with Mr. Fonblanque has stated, that "in relation to their gaseous contents, the lungs are the same in strangled as in drowned persons; for in both cases a quantity of air is forcibly

expelled from them before dissolution—an opinion which surprises me greatly, and which is directly opposed to the facts connected with strangulation. I would not have adverted to the error, however, in a work of inferior merit; but in one which stands so high as this does, and deservedly so, it is a matter of duty to point out every thing that is likely to mislead.

In determining whether the body found, was drowned by a murderer, or whether suicide was committed, or the drowning was accidental, what is termed the external circumstances of the case must be taken into account. Thus, if the marks of feet on the bank, indicating a struggle to have occurred are discovered; if the hand be clenched and grasping grass and other matters, there is reason for suspecting murder. It might be supposed that a body found drowned, with the hands and feet tied together, may confidently be regarded as a case of murder; but two cases at least are recorded, which display the impropriety of such an opinion being hastily delivered. One was the case of a guaging-instrument maker, who had been missing for some days, about the end of June, 1826. His body was discovered floating down the Thames; and when taken out, the wrists were found tied together and fastened to the knees, which were in like manner secured to each other. The cord employed for this purpose was proved to have been one that had hung from the top of his bedstead; and which, when he was ill some weeks before he drowned himself, he had employed in raising himself up in bed. He was a good swimmer, and it was supposed that he had tied himself in this manner before precipitating himself into the water, to prevent himself from swimming. There was sufficient evidence of this man's insanity, but none that he had thus tied himself; yet, on the presumption which I have stated, the coroner's jury properly, in my opinion, returned a verdict, "found drowned." In the second case, the evidence was still more conclusive than in the former. The man was reduced to great pecuniary distress. One day he took an affectionate farewell of his family, declaring that he would not return until he had procured some employment. On the following day he was taken out of the New River, with his hands and legs tied together. In his pocket was found a card of his address, and three-pence in money. He had five-pence when he left home, and it was supposed that he had expended the other two-pence in the purchase of the cord with which he was tied.

As illustrative of this part of our inquiry, I would refer to the reports of two surgeons, and of the colleges of surgeons and of physicians of Edinburgh, respecting the causes of the death of Sir James Standsfield, and the trial of Samuel Cowper, for the murder of Sarah Strut. (See Paris, Appendix, p. 227).

The first case exhibits an instance of parricide, which, for the honour of human nature, seldom occurs. Philip Standsfield, a son of Sir James Standsfield of New Milns, Scotland, a man of vicious and dissipated habits, had repeatedly sworn that he would take the life of his father; which, at length he accomplished by strangling the old man in his bed chamber, at the dead of night. He afterwards carried the body to some water, into which he threw it, in the expectation that it might be supposed Sir James had drowned himself, but the body floated in the morning; and, although it was taken out and interred, yet, suspicion having been excited, two surgeons were sent for from Edinburgh, by order of the king's advocate, Sir John Dalrymple, to examine the body. It was accordingly dug up and subjected to dissection.

The only other subject connected with our present inquiry to be noticed, is one of much importance in prosecuting evidence with respect to the time at which a case of death from drowning occurred, when no other evidence than the appearance of the body can be obtained to throw any light on the investigation. This can only be determined by the degree of putrefaction at which the body has arrived; and nothing is more fallacious than this ground of judgment. After a certain time, bodies that have been drowned, rise and float on the surface, owing to the extrication of gaseous matter during the progress of the putrefactive process; but no precise time is fixed for this result, which varies from many collateral circumstances. It is evident, however, that a body found floating, must have been under water for two days at least. The body of the celebrated Caraccioli, the Neapolitan admiral, who was hanged, and afterwards thrown into the sea, with shot attached to the feet, floated in thirteen days after it was committed to the deep; and, as it neared Lord Nelson's ship, on the deck of which the king of Sicily was walking, produced in the guilty monarch a yell of horror, and the expression, "he comes!—he comes!—vien! viene!" It does not at all follow that bodies, whether dead before being submerged, or those of persons drowned, should not float before putrefaction takes place; but in general they do not float until after two days have elapsed. When the water is not deep, and in a clear running stream, the body does not putrefy, but is converted into a substance resembling spermaceti—adipocere; and the period of time required to effect this change, has been made the subject of legal inquiry. (See Male, p. 239).

In summing up the whole of the evidence necessary to be adduced on trials of suspected murder, or suicide by drowning, many of the collateral circumstances are of great importance, even in those points in which a medical witness is likely to be examined. For instance, if a fracture of the skull were evident on a body found in the water, it might

become an important question whether it would have been produced by a person precipitating himself, or being precipitated from a height above the river, from which circumstantial evidence would lead to the assumption that he had fallen. In this case, not only the nature of the fracture, but the height of the spot from which the fall had taken place; the direction in which the blow was received; the difference of effect between that produced by a heavy body descending with the force of a blow upon the skull, and that caused by the descent of the body upon a resisting substance, as a point of rock for instance; and many other circumstances would require to be investigated and taken into account before a correct opinion could be delivered. But on many of the points of collateral evidence, I must refer you to the able opinion of my learned colleague, who will not only direct your attention to those most likely to suggest themselves to the mind of an acute barrister, in his cross-examination of a medical witness; but will put you upon your guard to avoid being entrapped by questions which would lead to unsettled physiological discussions, that only tend to throw ridicule upon the profession of medicine, and obstacles in the way of the strict administration of justice.

So much has been said on the subject of wounds and mutilations, that nothing remains but to point out the method of ascertaining, when sudden death occurs from wounds, whether these have been the effects of accident, or acts of suicide, or of homicide.

Some years ago a medical man left town to enjoy a few days' shooting in the country. No uneasiness was experienced by his family on his account; but before the time expired at which he had promised to return, intimation was brought that he had been found dead, on one side of a hedge, in a field; and that the body appeared as if it had lain there for some days. A coroner's inquest was held, but little satisfactory evidence was obtained, as doubts remain to this day whether his death was accidental or an act of suicide. The circumstance of no robbery having been committed, his watch and his purse being found on his person, set aside all idea of murder. I mention this anecdote to shew you the importance of such an inquiry; and it becomes particularly so in cases in which the life of the person is insured for the benefit of his family.

Under the idea that accident is the cause of death, every collateral circumstance must be taken into account: the situation and attitude of the body; the position of the instrument with which the wound is supposed to have been inflicted; the direction of the wound, and the part of the body in which it is situated. Thus in such a case as I have related of the medical gentleman, if the body and the gun had not been moved by those who found the body, it might have been as-

certained as to the fact of the death being accidental, as it is likely had it been so, the butt-end of the gun must have been employed to clear the passage of the hedge, and the body have fallen into the hedge, or been left on the side of it opposite to that on which the gun lay. If two men have been together, and one is shot, if the ball can be traced to have entered from below, and passed upwards, the probability will be that the gun was on the trail when it went off, and consequently that the death was accidental.

When suicide is doubted, the manner in which the wound must have been inflicted should be strictly investigated. Thus if a man is found with his throat cut, it should be determined whether the wound has been inflicted by the right or the left hand; for if the manner of the wound be such as cannot be readily produced with the left hand, and the person be nevertheless a left-handed man, it cannot be ascribed to suicide. It will be found that the depth of the wound is always least and most oblique on the side opposite to that of the hand which inflicted it. In Hargrave's State Trials is the case of a woman, Jane Norkott, who was found dead in her bed, with her throat cut, and a knife sticking in the floor near her. A verdict of *felo de se* was brought in by the coroner's jury; but suspicion having arisen respecting the cause of death, the body was disinterred, and some of her relations who slept in an adjoining room were put upon their trial for the murder. Many circumstances were proved which tended to implicate the prisoners; but the evidence was incomplete, until it came out, that on the left hand of this unfortunate woman the mark of a bloody left hand was observed, which could not of course be that of the deceased. Sir Nicholas Hyde, who was Chief Justice, made this remark, "How can you know the print of a right hand from that of the left in such a case?" The reply of the witness was extremely satisfactory. "My Lord," said he, "it is hard to describe; but if it please the honourable judge to put his left hand upon your left hand, you cannot possibly place your right hand in the same posture." The experiment was made, and the jury being convinced, as no satisfactory defence was set up, the party, with the exception of one, was condemned and executed. If fire-arms be employed, it is not likely that suicide has been the cause of death, if the ball be found to have entered from behind. It is of the utmost importance to ascertain whether the wound has been inflicted before or after death, and this may be done by the degree of hæmorrhage and other circumstances which I have already pointed out. Sir Edmondsbury Godfrey, during the pretended popish plots, in the reign of Charles the Second, was strangled on the 12th of October, 1677, in Somerset House. The body was concealed until the fourth day afterwards, when it was removed in a sedan chair

and thrown into a ditch. The murderers passed his own sword through him, to excite the belief that he had committed suicide; but on the evidence of two surgeons who examined the body (Messrs. Skillard and Cambridge), it was proved that the wound could not have been inflicted during the life of Sir Godfrey, as no blood was found at the wound or near the place, and none followed the sword on withdrawing it; and beside, the neck was dislocated, a mark an inch broad round, and the eyes bloodshot. The murder was discovered, and three men, of the name of Green, Hill, and Berry, tried for it, convicted, and executed. In such a case, it may be said that a fallacy might arise from blood flowing from a wound made after death; but in that case the blood does not coagulate, which is always the case with blood drawn during life. In Sir Everard Home's account of the supposed suicide of Selis, a servant of the Duke of Cumberland, who was reported to have attempted his master's life, one of the reasons given for supposing the wound on the throat to have been inflicted by his own hand is, that it was long and straight; "any struggle," says Sir Everard, "would have made it irregular." On this point, I must accord with the remark of Dr. Paris, "that this is really a refinement that I do not pretend to understand." If weapons be found near a dead body with wounds inflicted upon it, we must ascertain whether the wounds could have resulted from the use of these instruments. Thus in 1764 a citizen of Leige was found shot, and his own pistol lying near him; but on examining the ball which was extracted from the wound it was found too large ever to have entered that pistol; murder was therefore inferred, and the murderers were afterwards discovered. The wadding of the fire-arms employed has even led to the discovery of murder. In a case mentioned by the Lord Chancellor, in 1820, the wadding of the pistol was found to correspond with a torn letter in the possession of the murderer.

The determination of those bent on self-destruction is often extraordinary. (Here the lecturer related the story of Mr. Adams.)

In this instance there was no difficulty in determining the cause of death; but this is not always the case. In Hecker's Annales for 1826, a case is related of a Silesian butcher, who, whilst labouring under severe depression of spirits, surprised his wife in the very act of infidelity with one of his men. This discovery drove him to distraction, in which he endeavoured to kill himself by dashing his head against the wall, but not succeeding, he seized a cleaver, and struck himself repeatedly in the forehead with the edge of the instrument, until he fell down from the loss of blood, and the violent commotion of the brain. Now, independent of the frantic resolution displayed in this case, if the outrage had not taken place before witnesses,

the conclusion, in the absence of evidence, would have been, that the murder had been inflicted by the hands of another person, and in all probability suspicion would have fallen upon the adulterer. (With regard to the law of suicide, see Russell, p. 429).

With respect to the proofs deduced from collateral objects, such, for instance, as the indications of a struggle having happened, and remaining visible on the ground—the traces of footsteps near the place where the murder is supposed to be perpetrated—the absence of such traces—the nature of weapons found near the body—and the circumstances to be learnt from the examination of competent witnesses—these are matters much connected with the medical part of this course.

There can be little difficulty in determining the fact when persons have been accidentally or wilfully burnt to death; but questions may arise when no witnesses are present to testify to the manner in which the fire originated—whether the fire was the cause of death? Foderè mentions a case, in which several individuals were murdered with an axe, and the house in which they were, afterwards set on fire by the murderer. The medical man, whose duty it was to examine, reported them as simple instances of death by fire; but circumstances having occurred to excite suspicion, the bodies were taken up and carefully examined. It was proved that the fire had only scorched the bodies superficially, and that the marks of the wounds from the axe were distinctly visible; thence investigation was made, and the murderers detected.

I do not think it necessary to occupy your time with any speculations of mine on the subject of spontaneous combustion. You will find all the information you can desire on this part of our subject, in the *Philosophical Transactions* for 1745, in the *Dictionnaire de Sciences Medicales*, and in a work expressly on the subject, entitled *Essai sur les Combustions Humaines, produites par l'abus des liquers spirit*, by Jarre Aimé Lair, published at Paris in 1808. I have never seen any cases of this morbid condition of the body, yet I do not deny the possibility of the event; but it is so rare as scarcely to demand your attention. Nevertheless, Foderè asserts, that combustion has taken place, in which it was possibly spontaneous, and, yet, persons have been accused and condemned for the supposed murders.

Murder, or suicide, may be the result of starvation, consequently the symptoms of it should be familiar to the medical witness.

It is unnecessary to say that the life of the body cannot long be sustained under privation from food; although the period to which it may be protracted varies considerably, owing to circumstances connected with the age, constitution, and situation of the individuals subjected to it. I will first detail

to you the effects of starvation on the living body, antecedent to its termination in death; then the appearances presented by dissection of the body after death; and afterwards point out the causes which modify the results of either a forced or voluntary privation of food; and the difficulty of determining between starvation, from a mere examination of the symptoms, and some states of disease.

The first visible effect of starvation is emaciation and debility; but these do not display themselves for the three first days. The countenance, however, becomes pale, and the expression languid: the voice fails; the extremities become cold; the pulse sinks, and the muscles lose the power of responding to the will. An icy coldness often spreads over the body; and the pulse ceases to be felt; sleeplessness; palpitations at the heart alternate with headache and syncope; mild delirium supervenes; not unfrequently, however, if the wretched sufferers survive this state, a second series of symptoms present themselves; the pulse again becomes perceptible; palpitation of the heart alternates with syncope; the delirium rises to a degree little short in violence of that which characterises phrenitis; and the exhaustion consequent upon this flash of apparently reviving power, quickly extinguishes the vital spark in the wasted frame which it had previously almost ceased to animate.

Life, under such circumstances, is scarcely extinct ere a foetid, aerial odour exhales from the body; the eyes are red and open; the tongue and throat are dry, as if completely parched up. On opening the head, the brain displays something like increased vascularity, and serous effusions are found in the ventricles and between the membranes. In the thorax, the lungs seem shrunk, and as if withered; in the abdomen, the stomach is often reduced to one fourth of its natural size, and the intestines are found nearly empty; the gall-bladder is turgid with bile, and the duodenum and small intestines deeply imbued with it; whilst the blood-vessels are contracted, comparatively empty, and the blood nearly devoid of crassamentum. Sometimes the small intestines display marks of inflammation.

The most remarkable effects in the series which I have enumerated, are those displayed in the cerebral organs; and they demonstrate how closely the two extremes of abstinence and of excess resemble one another in their effects on the nervous energy. The symptoms during life, and the post mortem appearances displayed by dissection, leave little difficulty in recognizing this condition, and permitting a decisive opinion to be delivered: at the same time, from its simulation of phrenitis in the adult, and of hydrocephalus in children, care must be taken not to confound them.

In cases of spontaneous starvation, the cerebral symptoms are in a great measure

absent, the mental stimulus of stern resolution operating upon the brain in a manner sufficient to prevent the development of the delirium. There are few cases of voluntary abstinence on record. In the *Journal of Foreign Medicine*, No. v, is one described by the suicide himself, who lived eighteen days, and was found still alive but feeble, speechless, and insensible. He died immediately after having swallowed, with difficulty, the yolk of an egg in broth. In this instance, no cerebral symptoms seem to have displayed themselves. The most striking example of mental resolution warding these off, is in the history of Luc Antoine Viterbi, a Corsican, who was condemned to death as an accomplice in the assassination of Frediani, and voluntarily starved himself. The details are copied from the *Corsican Gazette* into the *London Medical and Physical Journal* for March, 1822, and from it into Dr. Paris' work on *Medical Jurisprudence*. Viterbi lived twenty days, merely gargling his mouth occasionally. On the 19th day, a slight pain at intervals affected his heart, and for the first time he felt a ringing in his ears; at noon his head became heavy; his sight, however, was perfect, and he conversed as usual, making some signs with his hands. An icy coldness, which had occurred several times before, again assailed his body; the shiverings were frequent and dreadful; and his loins, in particular, were seized with a stone-like coldness, which extended itself down his thighs. On the 20th, Viterbi determined no longer to moisten his mouth; and feeling the approach of death, he laid himself out, and added, "I am prepared to leave this world." Death, says the narrator, did not betray his hopes. On the 21st. Viterbi was no more.

It is probable that in both these cases, the small quantities of water, which in Viterbi's case was taken in the mouth, and in that of the other was applied to the surface, during the eighteen days of fasting (for the suicide was often soaked with rain), certainly tended to protract life. Dr. Paris justly attributes the preservation of Elizabeth Woodcock, who for the space of eight days, was buried under the snow, near Cambridge, to the fluid which she obtained by occasionally sucking the snow.

Children sooner die from starvation than adults; and in after years, the rapidity of this kind of death is proportioned to the youth and vigour of the body—a fact of some importance to be known, as questions may arise

respecting the right of survivorship, in the event of shipwreck, and two or more people being saved on a barren rock, and afterwards dying of famine. In the account of the awful death of Count Ugolino and his sons, given by Dante, the sons perished before the father, who survived till the eighth day of his imprisonment. On the same principles, women are able to bear abstinence longer than men.

It is thus obvious that the symptoms which mark starvation are sufficiently obvious; and it is a melancholy reflection, that many instances of it have been brought to light, as subjects of legal investigation. (1 East, P. C. 226; 1 Leach, C. C. 163; 2 Campbell's Reports, 650).

When a medical man is called to examine a case of this description, the first object in view is to ascertain whether the starvation be a case of suicide or of murder; and some data have been pointed out in the cases to which I have referred, in which the brain was examined for determining this point. Thus, if the appearances in the brain resemble those of extreme excitement, there is much reason for supposing that the starvation was involuntary, and of course a case of murder; but if no appearances of this description present themselves, we may conclude that it has been an act of suicide.

Before dismissing this subject, it is of importance to point out the management of such cases, when death does not ensue. The first object is to restore, if possible, the animal temperature, which is always alarmingly diminished, before a morsel of food be administered. This should be effected by means of moderately warm flannels, bladders filled with hot water, and such like, applied to the pit of the stomach, whilst, at the same time, assiduous frictions are applied to the surface. Food should then be administered of a fluid kind; and, even that which becomes solid in the stomach, such as milk, should be avoided. A little broth, thickened with any farinaceous matter, should be cautiously given at long intervals, and gradually augmented in quantity. Much care is also necessary to remove every source of irritation from the alimentary canal; and, therefore, the bowels should be daily relieved by enemata of barley water. By such a method of proceeding, the tone and powers of the first passages will be gradually restored, and the wretched patient again restored to life, if not to health and vigour of body.

A LECTURE

Delivered in Chelsea Garden, on Monday, 27th April, 1835;

BEING

INTRODUCTORY TO THE COURSE OF BOTANICAL DEMONSTRATIONS.

BY GILBERT T. BURNETT,

PROFESSOR OF BOTANY, IN KING'S COLLEGE, LONDON; TO THE MEDICO-BOTANICAL SOCIETY; AND TO THE SOCIETY OF APOTHECARIES.

GENTLEMEN—The last person a man should suffer to speak of him is himself; for whether his words be few or many, it is likely he will be blamed for having said both too little and too much. Still there are occasions, and the present appears to be one, in which such a risk should be encountered; and I could not reconcile the omission to my notions of propriety, were I to enter upon the duties of the office to which I have lately been elected, without publicly expressing my deep sense of the responsibility which attends the honour conferred upon me, and of returning my thanks to the Court of Assistants in that manner which I know will alone be acceptable to them, viz. by tendering an assurance that I shall be constantly engaged in attempting to further their desire of rendering this garden, in every possible way, conducive to the advancement of science.

Gentlemen—It is now about 20 years since I first followed to the fields that venerable and venerated old man, who held the office of Professor of Botany to the Society of Apothecaries for almost half a century. I can easily recal to mind the sensations of pleasure with which I listened to his peripatetic lessons as we wandered over hill and dale, and the feelings half of wonder, half of shame, that for so long I had neglected to examine minutely the plants daily trodden under foot, for so long had been wilfully purblind to the chief beauties of the creation—but this is a topic on which, however grateful, I must not now descant, and I have referred to it merely as affording an epoch whence to trace the revolutions which have so rapidly succeeded each other, and have so entirely changed the aspect of our science, that I cannot but do something more than suspect my much esteemed preceptor would find himself half a stranger in the provinces where then, none were so familiar as he.

Gentlemen—At the time to which I refer, the only Lectures on Botany delivered in London, were the lectures on this foundation—I might almost say in England; for those at our universities had fallen into neglect. At that time our various medical schools, all now so well provided with botanical teachers, were wholly unconscious of a lecturer on botany. It is true that occasional attempts were made both at St. Thomas's Hospital and by several private individuals, to institute courses of lectures, but they all without exception failed. Botany, although extolled and recommended as a branch of medical education, was not absolutely required, and the students were too few to allow the lectures to be continued. Hence, had it not been for the exertions of this society, in fostering botany through the dark ages of its neglect, this most important branch of science, which is so intimately connected with our profession, as almost to deserve to be ranked as part of its foundation, might have been severed from the study of medicine, and its cultivation have become obsolete among us.

Gentlemen—It may not be known to all now present, and therefore I may be permitted to mention the fact, that this was the third botanical garden established in England, and the oldest now in existence. Gerard's garden, which appears to have been the first, was in Holborn, but now its place knoweth it no more; and Tradescant's garden at South Lambeth, has long since fallen into decay: while the Chelsea Garden has alone been permanently supported; yet this has not been done without great exertions, and repeated sacrifices on the part of the members: of these an account will be found in Mr. Field's Memoirs of Chelsea Garden. The early celebrity which this garden attained, and the reputation that it established, is well marked by the visits made to it by illustrious foreigners, as *Hermann*, who was here in 1682, and who by exchange enriched the botanic garden at Leyden, with plants from this collection. It has also been from time to time spoken of by Evelyn and others, in terms of high commendation; and furthermore, it was in this garden and by its officers, that many of those discoveries and observations were made that have served so essentially to advance our science. Doody and Petiver, who assisted the celebrated Ray, and furnished him with such abundant materials, that their names occur in almost every few pages of his synopsis, were, the former the curator of this garden, and the latter the first demonstrator. Jussieu, speaking of Doody, calls him "*Inter Pharmacopoeios Londinensis, sui temporis Coryphæus*," and Ray thus affectionately mentions Petiver, whose botanical knowledge was well known, "*Jacobus Petiver, non postremæ notæ botanicus, mei amicissimus*." To these may be added, the well known names

Rand, Miller, Forsyth, Hudson, Curtis, Wheeler, and others, who have successively held the offices of curator and demonstrator, and have earned for themselves and this establishment, the credit that both they and it enjoy. Sherard, a member of our society, and an active member of the garden committee, must not be passed unmentioned, for it was he who not only fostered this establishment, but cultivated at Eltham, at his own expense, a choice collection of rare exotic plants, an account of which was published after his death, by Dillenius, in a work entitled the "*Hortus Elthamensis*." A love of science seems to have prevailed in Sherard's family, for while he was fostering botany here, his elder brother, Dr. William Sherard, endowed the Botanical Professorship in the University of Oxford. It may likewise be observed, in passing, that it was from this garden that Dr. Walker, the founder of the Botanic Garden in the University of Cambridge, sought and obtained his first curator, in the person of Charles Miller, younger son of the celebrated Philip Miller, who was well entitled to the commendations bestowed on him by his foreign cotemporaries who styled him "*Hortulanorum princeps*." Linnæus, however, seems to have even more worthily estimated him, and to have been inclined to salute him as a chief among botanists, as well as among gardeners; for, he says, of his great work, the *Gardener's Dictionary*, "*non erit Lexicon Hortulanorum, sed etiam Botanicorum*."

It would be easy to swell this record by naming other members of our society, who have distinguished themselves as botanists, or have been more or less intimately connected with these gardens, either as patrons or students, or both. Yet a prolonged detail would be tedious, and might appear almost egotistical, or least might seem to display too much of the "*esprit de corp*," which, although not an unworthy spirit, must not be too freely indulged. We will, therefore, turn to another topic, referring those who wish for further information, to the memoirs of Mr. Field, already mentioned, from which many of the preceding facts have been derived: only in conclusion, adding that it was here that Sir Joseph Banks is believed to have commenced his botanical studies, under the tuition of the venerable Philip Miller.

The first herborising or botanical excursion undertaken by authority of this society, of which there is any record, was in the year 1633, upwards of two hundred years ago; but how long previously the herborisings, which were then first formally instituted, had been made is unknown. These excursions, at first few in number, were subsequently increased, and became highly serviceable in the instruction of students. And they have now been carried on for about two centuries, until merged in the establishment of more extensive courses of instruction.

When no other lectures were delivered in London or its vicinity, the instruction afforded here was with great propriety altogether of an elementary kind; but, now that the elements of botany are taught, and taught so well, in so many schools in London, it does seem that this garden, and the abundant illustrations it contains, may be more advantageously employed in practically illustrating its general principles or theories, as taught in the schools, than in simply teaching the rudiments of botany, which from the very rules which regulate the admission of students, viz., the recommendation of their teachers, it is presumed have already been (in the majority of cases) elsewhere attained. Indeed, I cannot conceive it to have been ever the intention of the garden committee to invite the botanical lecturers of the metropolis to send the students of their respective classes to Chelsea merely for the purpose of hearing repeated, in other words, and by another voice, those principles and rudiments of the science which can be both taught and learned as well in the lecture room as in the garden. And in this opinion I am confirmed, not only by what has previously been done, but also by what is now being done here, viz., the rendering various parts of the garden more available for practical study. During this season a dozen beds have been prepared and planted to illustrate the natural system of arrangement; and, although not yet quite completed, they will be so very soon.

This is an alteration in the garden—an addition to its previous means of study and instruction—which I should have been proud to have presented you with as the first fruits of my official labours. But, alas! I was forestalled. I found the work ready to my hand; and I am bound to advertise you that the scheme originated with the garden committee during the interval that occurred between the resignation of my predecessor, Mr. Wheeler, and my election; and that the design has been carried into execution under the superintendence of Mr. David Don, so well and so honourably known to us all.

Such, gentlemen, being the case, I propose to render these garden lectures and demonstrations as practical as possible; as far as possible to render them illustrations of the principles of botany which you are taught in your respective schools; to make them, in fact, to botanical students, what clinical lectures are to the students of medicine and surgery. You go to the lecture rooms in your various schools, you hear descriptions of diseases, their symptoms, and their treatment; but your instruction is imperfect, if you do not follow up the theoretic doctrines you have heard in the theatre, by observation in the wards of an hospital; and simple observation in an hospital will be of little avail without clinical instruction is at the same time afforded. In botany the case is strictly parallel: it consists, like other sciences, of its theory and its practice. The general principles may

be taught in the schools, but it can be practically studied only in the garden and the fields. We will not call this garden a vegetable hospital, because, although our plants are often sickly, and too often, notwithstanding all our care, will die, yet we may affirm that what the hospital is to the students of medicine and surgery, this garden may become to the students of botany; viz., the place where they may see those things of which they have previously only heard; and test, by actual observation of nature, the doctrines which are taught by man. Here, too, as in an hospital, we shall lead you to the bed-sides, sometimes of our vegetable patients, but more frequently introduce you to some of the fairest objects in creation, in a state of health; and assist you to study their physiological as well as their pathological conditions: and, after such observations have been made in the garden, we shall assemble here to deliver our clinical lectures.

Such, gentlemen, is the plan I intend to pursue; but, as at present few plants, excepting those which Linnæus figuratively called *precie*, messengers, or early risers, have raised themselves from their wintry couches, and the majority are (to continue the use of his poetical language), still asleep, and have withdrawn their heads beneath their coverlid of earth, I propose to fill up that time which must elapse before they awake, by giving a few introductory lessons, which will familiarize the subject to those pupils who have not attended any botanical lectures before; and which may, also, be not without their use in shewing the more advanced student that the facts, and all the main doctrines of our science, are the same, wherever they may be learned, or wherever taught; however various may be the general views which different lecturers may take, and however diverse the extent to which they pursue the subject.

But, in giving you my view of botany and its subdivisions, I would not have any one suppose that I wish to enforce it on your attention as the best that has been delivered, or to recommend you to let it supersede those you have already learned; on such points each individual may entertain his own opinion; only he should take care not to form one before he is well acquainted with the subject, lest he mistake prejudice for conviction. I shall merely give it you as a scheme which I have found convenient for collecting and associating the various subordinate sciences of which botany consists, and which I consider integral parts, while others in general esteem them distinct though collateral studies.

It is a curious fact, that the conclusion or end of a science, philosophically considered, is always the part first known and pursued in practice. Indeed it is the value of a few facts often accidentally discovered, and long empirically practised, which encourages research into abstract principles, and ensures a reward to the labours of the student. What is the value of that science, asked Franklin, which is not applicable to some useful purpose? And the question of utility is the touchstone by which all sciences must be content to be tried, for by it they will ultimately be judged, by it they will be approved, or by it condemned.

The utility of botany I am not here called upon to shew: its value has been too long established and too generally acknowledged, to admit of any comment. What I wish to direct your attention to, is the fact that it was the uses of plants which first arrested human attention—that it was their value as food, as medicines, and in the arts, which led to the investigation of their structure and their functions, as well as to their diagnosis and systematic arrangements—subjects upon which immense labour has been bestowed; and this chiefly, and in the first place altogether, because of their pre-eminent utility.

Illustrations of this position are so numerous, that one is puzzled in the selection. A plant is found having a pleasing aspect, an agreeable smell and delicious flavour; and moreover when eaten, proves to be wholesome and nutritious as food. Another is met with, which to a casual observer seems to possess many of the same qualities; this however on being eaten, may prove to be unwholesome—or at least unfit for food. It may yet, however, be useful as a medicine, or it may be a deadly poison. In either case it is essential that plants having such different properties, should be distinguished, otherwise food would be eaten in dread, if not in danger, and medicine be taken without confidence, if not in fear. It is absolutely necessary, therefore, that distinctions should be sought; and this is the work of science—mere habit, or empirical observation, is unequal to the task. We have, in some of our excursions, met with *experienced* herb-gatherers, who have collected *myrrhis temulenta* instead of *conium*, and who have laughed at our ignorance, in attempting to convince them of their error. Such instances are continually occurring; our officers at the Hall will tell, you that countrymen labour up to town with heavy burdens of useless plants mistaken for officinal ones. The fatal accident which occurred at Woolwich, must be in the recollection of all, when a gang of hungry convicts employed to raise the river wall on the banks of the Thames, dug up some fleshy sweet-tasted roots, which short commons persuaded them to eat, and of seventeen persons who partook of this repast, the major part were made seriously ill, and several died. A similar accident I find reported in the papers of yesterday, by which two children were destroyed.

The uses of plants in the arts, as affording habitations and clothing, and as food, every one who by nature is naked and hungry, will readily allow. Our cotton and linen manufactures, and the duties raised for the service of the state, on malt, hops, sugar, tea,

coffee, and tobacco, are likewise so constantly urged on our attention, from their extreme importance, that a simple notice is alone required; but the value of plants as medicines, they who are, or have been sick, alone can feel, and they can only feel, they cannot tell their worth.

My estimate of physic, gentlemen, is very different now to what it was a twelvemonth or two years ago. I will not say that I then regarded it merely as a profession by which a livelihood was to be obtained. I knew, I perceived, I was convinced, that it removed or mitigated much bodily suffering, that it assisted in the re-establishment, or hastened the recovery of health, and thus if it could not always preserve life, it smoothed the passage to the grave. I well recollect, as it was one of my early cases, the unspeakable effusions of gratitude which a poor creature looked, who after suffering a martyrdom with scirrhus pylorus, obtained temporary ease by the application of a plaster of extract of belladonna; and in another very recent case, a lady who had cancer of the neck of the uterus, spreading also to the neighbouring parts, the only intervals of ease which she enjoyed for many months were those produced by the administration of the acetate of morphia. She used to call her medicine her *blessed pills*, and said that however excruciating her pains, shortly after she had taken the pills, a calm appeared to steal over her, her agonies were lessened, her tortured body seemed lulled to rest, and after lying for some time, often an hour or two in a state of what she described as heavenly tranquillity, she usually slept; but she slept only to wake again to misery, for day by day her pains returned, and regularly increased in force as the influence of the medicine wore off, so that she watched with intense anxiety the time when she was again to take her blessed pills. Circumstances such as these reconcile us to much that is irksome in the study, to much that is unpleasant in the duties of our profession; and if some patients are unthankful, the gratitude of others and the consciousness of benefits bestowed, become more than an equivalent. Hence, if of any one, it may truly be said of the medical practitioner, that when the ear hears him, it blesses him, and when the eye sees him, it gives witness unto him; because he delivers the poor that cries, and he that hath none to help him, therefore the blessing of him that was ready to perish shall come upon him. Yet gentlemen, even with these convictions it was not until I myself was ill, that I truly felt and confessed the value of medicine—I had previously formed far too low an estimate of its powers—I had little weighed in my mind the felicity which a cessation of pain produces, a cessation often effected by a single grain of opium, by one sixth of a grain of morphia. During convalescence I had little understood the tonic powers of cinchona and our other vegetable bitters, but on rising from a bed of sickness, the sensible accessions of strength, during its administration, and the perceptible influence of each successive dose is accompanied by a degree of pleasure, which you must be very ill before you can hope to enjoy.

But, gentlemen, with such instruments in our hands, how great is our responsibility for their proper use. Medicines are fearful weapons, for according as they are wielded they may liberate the sick from the thralldom of disease, or they may render incurable slight ailments, fetter the body with permanent complaints, or even worse, spread through families death, desolation, and woe.

A man presuming to practise medicine without a competent knowledge of the means at his disposal, and the best modes of their application, is not simply a dishonest man, for he does not, like the fraudulent trader, merely rob his fellow creatures of their property, but he injures their health, and perhaps destroys their life; and if a life be lost by an ignorant practitioner, which might have been saved by one well-informed, is such a death to be considered a natural death? Is it not rather one of the most cruel and cold-blooded kinds of murder?

If these things be so, can we wonder that the study of plants, whence our most valuable medicines are derived, should be considered an important and essential branch of medicine? Can we any longer be surprised at the labours, immense as they are, which have been bestowed on the systematic arrangement and specific distinctions of vegetables? For a long time all our medicines were derived from this kingdom, and even now, although some important ones are of mineral origin, the majority of the most valuable and useful are vegetables, such, for example, as opium, cinchona, rhubarb, aloes, jalap, colocynth, senna, ipecacuan, cinnamon, hemlock, belladonna, assafoetida, catechu, digitalis, myrrh, castor oil, sarsaparilla, tobacco, &c., &c.; and even iodine, which triumphs over scrofula, and threatens to conquer cancer, and even consumption, is the produce of a long-neglected plant—the *Alga inutilis* of the ancients. What a satire on the judgment of man, as to the utility of the productions of nature.

Time forbids me to dilate further on this branch of our science; but the uses of plants are so well known, that more ample illustrations are needless: each person will be able to levy them in hosts. To discover the properties of vegetables, and to distinguish the active from the inert, is the purpose or chief end of botanical studies, and the uses of plants as food, as medicines, and in the arts, are the subordinate branches of one great department of botany, hence called *Phytognosia*, or the doctrine of vegetable utilities.

As the characters by which plants may be distinguished from each other can only be de-

rived from their peculiarities of form; the necessity of obtaining accurate diagnoses has naturally led to an investigation of their structure, and hence has sprung that branch of the science called, of old, vegetable anatomy, but now, in general, termed organography—which includes the investigation both of their external forms and their internal organic structures. To this must be added researches into their chemical constitution, and into those laws which regulate the developments of their various parts. The study of the structure of plants, first undertaken for the purpose of deducing diagnostic signs, is in itself so pregnant with interest, that it well deserves, and often obtains, attention on its own account alone. These investigations have likewise not only answered the purpose for which they were instituted, but have opened several new fields of inquiry, and led to some most important and very unexpected results, *e. g.* not only have differential characters been obtained, by which the various species and genera of plants can be with tolerable ease and certainty distinguished from each other, so that dietetic, medicinal, and deleterious vegetables need no longer be mistaken for each other or confounded; but furthermore, it has been shown that plants, not specifically the same, if they have the same general structure, are possessed of the same general properties. On this discovery is built the doctrine of homomorphism, one of the most important advances made in modern botany; for, from the ascertained properties of a few known plants, the qualities may be safely predicated of multitudes that are unknown. Thus not only is it ascertained that strychnos, atropa, colchicum, and digitalis are poisonous vegetables, but it has become an axiom in botany, that all plants having equivalent structures are more or less noxious likewise. Again, we thus learn, not only that the coleworts, apples, grasses, mallows, beets, and many others are innocuous and nutritious, but that all their associates or natural allies are possessed of similar wholesome properties, and may be used as dietetic vegetables. Further illustrations of the importance of this doctrine are scarcely wanting—but a few may be given. Thus it is known that all the marantaceæ or arrow-roots are nutritious and insipid; the gingers and their allies, innocuous, but sapid and powerfully aromatic; the pines resinous and stimulating, while the cycasæ are mucilaginous and insipid, but affording nutritious fecula; the labiatæ, or mint tribes, innocuous, but aromatic; the gentians bitter; the convolvuluses cathartic; the succory group soporific; the artichokes and their allies bitter; the myrtles aromatic; the poppies and their associates more or less powerfully sedative; and the ranunculus tribes acrid and poisonous; and so forth.

Such knowledge cannot fail to be highly useful and important, and its practical applications are obvious—of these time will only allow me to offer two illustrations, and the following is selected because its termination was less serious than many that could be quoted. Beverley, in his History of Virginia, tells us that some soldiers, who were sent to James Town to quell the rebellion of Bacon, mistaking stramonium for a spinach herb, gathered some of its leaves in a very young state, and after boiling, ate plentifully of them; the effect of which, he adds, was a “very pleasant comedy; for they turned natural fools upon it for several days. One would blow up a feather into the air; another would dart straws at it with much fury; another, stark naked, was seen sitting up in a corner like a monkey, grinning and making mouths; a fourth would fondly kiss and paw his companions, and sneer in their faces with a countenance more antic than any in a Dutch droll. In this frantic condition they were confined, lest in their folly they should destroy themselves. A thousand simple tricks they played, but, after eleven days, returned to themselves again, not remembering anything that had passed.”

Beverley might call it “a very pleasant comedy,” but to be deprived of one's reason for eleven days, and to be during that time not only a fool, but in danger of destroying one's-self, could be anything but pleasant to the sufferers, however comic their antics might be to bystanders; and in other cases where this plant has been taken, death has ensued.

Such an accident could not have occurred if the surgeon of the regiment had possessed a very slight portion of botanical knowledge. It contrasts well with another case, in which a ship's crew, suffering much in health from the deprivation of vegetable food, touched at a place where there were found abundance of plants, but none of them of the kinds which they had been accustomed to eat; but the surgeon recognising in an unknown plant those essential characters of a natural order of known innocuous qualities, at once with confidence selected it for food, and thus restored the crew to health, avoiding, by the means of science, the misfortune of rendering his companions madmen for a fortnight, or of poisoning them, as occurred to the poor fellows at Woolwich.

There are certain groups of plants which form apparent exceptions to these general rules, such as the umbelliferæ, the artocarpæ, &c., but these exceptions, some of which may be attributable to the newness of the research, and the imperfections of our classifications, are no hindrances to the practical application of homomorphism, although they have been ignorantly thrown forward as objections; for it is obvious, that if certain forms are ascertained to indicate wholesome properties, and others deleterious ones, while a third series are known to be present in plants of uncertain or variable qualities, the first and second would be accepted or rejected with confidence, while the third would be regarded with suspicion, and danger avoided; hence the end or purpose of the inquiry is attained.

Beings so curiously and wonderfully made as plants—being of such surpassing beauty and variety in their external forms, and demonstrative of such astounding skill in their internal mechanism, cannot but have some important functions to perform; and the investigation of them is the province of vegetable physiology. The functions of plants, I need scarcely say, are most curious and important, not only with reference to their own well-being, but in an equal degree to both animals and men. Their influence upon the atmosphere and upon the soil are among the most extensive and important of their functions. The renovation of the air by plants, when rendered irrespirable by breathing or combustion, although at one time questioned, is a fact now indisputably established, and their influence on its humidity, and on the salubrity of the soil, is much greater than is usually conceived. That swampy aguish districts have been drained and rendered salubrious by the judicious planting of trees, and that the humidity and temperature of various countries, such especially as our own, and other parts of Europe, have been varied, and even the quantity of rain that falls, been lessened by the felling of woods and clearing extensive tracts of forest land, are truths too well known to be more than just adverted to. The influence exerted by plants in the conversion of inorganic into organic matter, is likewise another most important function, and one exclusively their own, for it is a power that animals do not possess; while the metamorphoses they effect in refuse matter, changing every sort of filth and ordure which is supplied to them in the form of manure, into substances fit for food or raiment, are no less strange than they are common. We are astonished at the chemist, and extol his skill for converting, by an expensive process, linen into sugar, wood into a sort of flour, starch into gum, and so forth—and rightly do we give way to wonder; but conversions similar, though much more perfect and extensive, are being wrought by every plant, even by the humblest weed that grows. They are constantly engaged in the manufacture, if we may so express ourselves, of flour, sugar, oil, resin, flax, cotton, and all the other numerous vegetable substances which are so conducive to our comfort, nay, so essential to our existence, from earth, air, and water—presenting us not only with new organic matter, derived by their agency from the mineral kingdom, but also renovating that which, having been fed on or otherwise used and spoiled by men and animals, they cast, with loathing, on the dunghill, and for the most part fail to recognise when returned to them as corn, and oil, as culinary vegetables, as delicious fruit, and as fragrant and beauteous flowers. The scientific culture of plants is founded on a knowledge of their structure and their functions, or it is a branch of vegetable physiology; and vast have been the improvements in both horticulture and agriculture, since empirical practice has in some measure been superseded by scientific principles. The system of assolements, or the rotation of crops, by which the produce of our land has been quadrupled, and the acclimation of plants with their hybridizations, by which the fruits and flowers of more southern regions are reconciled to our climate, are a few among the many examples which might be given of the benefits conferred by this science upon some of the most useful arts. The increase of food, and the fact of the more choice vegetables becoming cheap and common, cannot fail to have been observed by every one. Each year our markets and shops are supplied more abundantly and with more choice vegetables. Sea kale, for example, which a few years since was rare and costly, is now cheap and common. Coleworts, cauliflowers, and the various kinds of broccoli, are not only improved, but have become more plentiful and cheap; while the potato, second only to corn in its importance, if not altogether, as an esculent vegetable, the offspring of science, has been so much improved, varied, and multiplied by human skill and industry, and so much increased in value, as to be more indebted to its foster parents in Europe, than to the American savages by whom it was originally discovered. But here again inexorable time cuts short the thread of our discourse.

If plants in a state of health are so essential to our existence, and conduce so much to our comfort and our pleasure, it would surely be ungrateful in us to neglect them when diseased. Vegetable pathology forms, then, another subordinate branch of our science; and although the maladies of plants have not hitherto been studied so much and so successfully as those of men and animals, still we know enough of them to be able to perceive that they suffer from the attacks of various diseases, some of which we are enabled to relieve, and others which are incurable in the present state of our knowledge. Plants, perhaps, suffer more from invagination and the attacks of insects than from any other means; yet they are subject to other diseases, both of a sporadic and epidemic kind. Some of these even bear a similitude to animal disorders, and have, therefore, received similar names, of which Wildenow furnishes a catalogue. Thus, plants are affected with atrophy, tabes or consumption, anasarca or dropsy, hæmorrhage, lepra, verrucæ, or warts, chlorosis, icterus, ulcerations, common gangrene, and necrosis, or dry gangrene, besides various kinds of deformities, wounds, mutilations, &c. &c. They are likewise subject, especially the cacti, to a peculiar kind of sudden death, called by the French "*la mort*," by which, when affected, a branch or even a whole plant is as rapidly destroyed as the use of a limb is lost, or death produced in animals by apoplexy.

Plants, although they will bear judicious pruning, resent barbarous operations, and even

accidental injuries. In them, as in animals, contused wounds, especially contused and punctured wounds, are much more dangerous than incised ones; of this there is an example in the adjoining green-house. It is a splendid agave or American aloe; this, which is one of its leaves, was pierced last season with the ferrule of an umbrella by one of the visitors to the garden. The parenchymatous substance became diseased; it spiculated, and the mortification, which at first extended upwards, subsequently began to descend and travel so rapidly towards the base as to render amputation necessary. The operation was performed, but, as you will perceive on examining the plant, the mortification had previously extended in an insidious manner so far towards the centre that a fatal termination is to be feared. As an illustration of the vitality of plants, and their proneness to disease from injuries, no example could be more satisfactory; but I am sure I need not formally reprobate such wanton mischief. Experiments of all kinds are justifiable, but to destroy a noble plant like that, without any object to be attained, could only have been done through thoughtless ignorance, for I would not attribute it to any other motive.

The diseases of plants are often, although injurious to them, beneficial to man, while at other times their unhealthy conditions so far deprave and change the quality of their ordinary productions, as to render those which are usually wholesome and nutritious, either worthless, baneful, or even poisonous. The production of agalocum and the various kinds of galls and gums, are instances of vegetable disorders being serviceable to man, while the diseases of corn, such as the smut, canker, rust, &c., and especially the ergot, are familiar examples of the fearful havoc they make in our crops, the former rendering a harvest worthless, and the other converting our sustaining corn to poison. It must, however, be recollected that the ergot is, when properly administered, a most valuable medicine, and also that these apparently grievous evils are such only on a partial view; they are injuries only when particular instances are selected and isolated, for it is on all hands confessed that in the general economy of nature they are highly beneficial, as forming a part of the system of checks and counterchecks by which the balance is corrected when the strong overpower and would exterminate the weak, and preserve that equality which could not be otherwise maintained. To modify their influence, and protect ourselves from their injurious prevalence, is the duty of science, and the more the study of vegetable pathology is pursued, the greater will be the power we shall obtain of turning even these apparently malevolent incidents to our advantage.

(To be concluded in our next.)

Reviews.

Physiologie Medicale et Philosophique. Par Alm. Lepelletier de la Sarthe. 8vo. pp. 495. Paris. G. Balliere.

THIS system of physiology is to be completed in four volumes. The author has undergone immense labour for several years, and has classed in methodic order the vast materials on the works of preceding physiologists; he has examined the comprehensive systems of the indefatigable and illustrious Haller, and of contemporaneous authors, and replete with facts, he then devoted himself to teaching, and delivered courses of physiology in the French schools. In the present work, he offers the results of all his labours. He hopes it will be useful to his readers, by confirming them in the doctrines of vitalism, and preserving them from those theories which spring from the imagination, but which the judgment destroys. He divides his work into three parts; 1, prolegomena; 2, study of the functions of the living economy; 3, the completion of physiology. The first part comprehends all considerations relative to the

fundamental bases or general principles of physiology. The general study comprises bodies, properties, functions, and economies. The second part comprises the generalities of functions of the living organism, and the history of each function. The volume before us is devoted to these two parts.

There is a great similarity between this work and Tiedemann's Physiology, but our brethren have the advantage of possessing the latter in our vernacular language, owing to the valuable translation of our able and learned friends, Dr. Gully and Dr. Hunter Lane. We are happy to state that their translation has, as we predicted in our review of it, a large sale, and it well deserves it. There is, however, an astonishing identity in many parts of both productions, and in Dr. Fletcher's Lectures published in this Journal; and yet the three differ most widely on many points. The majority of our readers are so well acquainted with the doctrines and classifications of Tiedemann and Fletcher, that we shall now place those of Lepelletier before them. The great scope of the domain of physiology demands a full exposition.

our author's arrangement of the subject, and obliges us to give copious extracts.

"General Observations on Organic or Living Bodies, and Inorganic Bodies, or those not endowed with Life."

"All beings in the universe are divided by naturalists into two classes; 1, *celestial bodies*; 2, *sublunar or terrestrial bodies*.

"The terrestrial bodies are composed of air, earth, and the water, with all the material beings contained in them; and the latter are divided into two orders; 1, *organic bodies*; 2, *inorganic bodies*. The *organic bodies* are all those which are composed of organs, whose union forms the different parts or systems, the functions of which preserve the individuals, repair the losses, and perpetuate their species. These are divided into *vegetables* and *animals*.

"*Vegetables* possess nutritive and generative functions; they have only very partial motion, and never general locomotion. *Animals*, in general, including man, not only possess the functions of nutrition and generation, but many other relations, and a complete power of locomotion, or moving from place to place.

"Inorganic bodies are fossils or minerals, fluids, and gases.

"It is not as yet determined whether imponderable substances, as light, heat, electricity, and magnetism, have a separate existence, or are only manifestations of the activity of certain ponderable bodies.

"Animals in general are guided by instinct only, and do not possess individual intelligence or mind.

"The special object, however, of our study is man, who, by the superiority of his organization as well as by his reason, an attribute peculiar to his species, is placed immeasurably beyond irrational beings.

"The whole of these bodies, organic and inorganic, the mutual connection of their phenomena, the reciprocal equilibrium of the different laws that govern them, form *nature*, *natural economy*; and this with the *celestial economy* united, constitute all *that infinity* which is called universe.

"The external configuration and internal aggregation of organic beings and inorganic substances are widely different."

M. Lepelletier gives a most minute description of the distinctive marks between organic and inorganic bodies; but as these have been so graphically and comprehensively enumerated by Dr. Fletcher in a former number, we omit them on the present occasion.

We have next a comparison of the composition of organised and inorganised bodies, which will be perused with deep interest by those attached to the study of physiology.

"All organic bodies are composed of fluids

and solids; they possess but little consistency and rigidity when first formed, and all are soft and flexible, either throughout, or in a great number of their parts. The consistence and rigidity vary according to age.

"Inorganic bodies, on the contrary, which are entirely composed of solid parts, are remarkable for their great rigidity; their parts do not differ in consistence, neither does their rigidity vary with the duration of their existence.

"The solid parts of organised beings originate from fluid. Every animal and even plant originate from a fluid in the midst of which they are formed.

"Fluids are also incessantly furnishing the materials for the solids, as water, chyle, and blood.

"Organic bodies are covered with a skin or bark, pierced by different openings to admit the absorption of substances from without, and to expel substances from within. Minerals and other inorganic bodies have no such covering.

"There is a reciprocity of action between the different parts of organised bodies, so that the greater number of the more complex of them cannot be divided, without being deprived of existence.

"All organic beings derive materials from surrounding bodies; they attract the constituent principles of the air, water, and food, which they introduce into their own structure for its nourishment.

"No change whatever occurs in inorganic bodies; the permanency of forms of crystals, for example, proves their composition to be in a state of repose."

The accuracy of the preceding comparisons cannot fail to be admitted by every intelligent reader. The axioms are so simple that every one can comprehend them. Indeed, the author excels for the fidelity of his descriptions, and the classic beauty of his style. Every sentence is replete with information. He proceeds as follows:—

"Material Composition of Organic and Inorganic Bodies."—There are important differences between the chemical mixture or composition in the two groupes of bodies.

"The number of elements which enter into the composition of a plant or an animal is smaller, being nineteen, while there are fifty-two in the other kingdom. (Fiedemann, *Op. Cit.*)

"There are in the vegetable kingdom, starch, vegetable albumen, gluten, gum, sugar, &c., which are composed of carbon, oxygen, and hydrogen; and in the animal kingdom, we find gluten, albumen, fibrin, gelatin, mucus caseign, &c., which are composed of the three elements or gases, oxygen, hydrogen, and carbon, with nitrogen.

"All organic and almost all inorganic bodies are composed of simple materials or

elements, variously combined with each other, and which may be separated by chemical experiments. When we examine and compare the chemical constituents of organic and inorganic bodies, we recognise the greatest differences between them. Thus, in the vegetable kingdom, we find starch, albumen, gum, sugar, &c.; and in the animal kingdom, albumen, fibrin, gelatin, mucus, &c. These are termed by chemists the immediate or proper constituents of organized bodies; or simple organic compounds. On submitting these substances to further chemical analysis, we find them composed of other principles which cannot be further decomposed; and on this account they are denominated elements. There are in animals, oxygen, hydrogen, carbon, and nitrogen; and in vegetables, oxygen, carbon, and hydrogen; and in some few cases a small quantity of nitrogen. Besides these, there are non-metallic substances, metallic alkaline, earthy, and ponderous metals. There are also the imponderable substances, light, heat, galvanism, magnetism, and electricity. It will immediately appear, that organic bodies do not differ from inorganic, with regard to elementary matters. But great differences exist with regard to the number of elements which enter into the organic combinations, and the manner in which they are united.

"It will also appear, that the number of elements that compose organic bodies, is much less considerable than that of the elements of the inorganic kingdom. All simple substances, therefore, do not enter into the composition of organic bodies.

"But although the elements of organic bodies are comparatively few, nevertheless, the composition of a living body, a plant, or an animal, is much more complicated than that of an inorganic body—a fact which Kiemeier has noticed in his lectures on general zoology.

"Organic substances are composed of three or four, and occasionally of more elements. Thus, vegetable sugar, starch, and mucus, are composed of carbon, oxygen, and hydrogen; and animal substances, of fibrin, albumen, mucus, &c., which are composed of oxygen, hydrogen, and carbon, with nitrogen. The ternary or quaternary combinations of these four elements, in proportions varying *ad infinitum*, form the immediate products of organised bodies—a fact clearly proved by the researches and experiments of Thénard, Gay Lussac, Berzelius Prout, Thomson, Berard, Saussure, Ure, and others.

"Inorganic bodies, on the contrary, are proved by Berzelius to be binary combinations, that is, resulting from the union of two elements alone, or as combinations of two binary compound bodies; or lastly, as combinations of a binary compound with a simple element. Thus, oxygen with hydrogen forms water; with sulphur, phosphorus, nitrogen, and carbon, it forms sulphuric,

phosphoric, nitric, and carbonic acids; combined with calcium, sodium, and potassium, it forms lime, soda, and potash; chlorine united with hydrogen forms the hydrochloric or muriatic acid, and nitrogen combined with hydrogen forms ammonia. All these compounds are therefore, only double binary compounds. Organic compounds are readily decomposed by chemical operations, but they cannot be reproduced, like those of inorganic compounds. Chemists have separated the elements of vegetable constituents, as starch, fibrin, gluten, &c.; but no one as yet has decomposed them in all their parts; the same result has been observed with regard to all the fluids and solids of living bodies. It is therefore reasonable to conclude, that the composition of living or organised bodies is not the result of chemical affinity or union alone, but dependent on the power peculiar to such bodies—the vital power.

"The elements of inorganic bodies are not disposed to change or unite with other substances; while those of organic bodies have a constant tendency to do so.

"There is another difference between organic or living, and inorganic or inert bodies, as regards their chemical composition and configuration, it is this—that the first, although, they resemble each other most closely in their composition, nevertheless, present a much greater diversity in their forms. Thus, what an immense variety of forms the vegetable and animal kingdoms exhibit, notwithstanding the inconsiderable number of elements which constitute living bodies in general. It is well known that the component parts of the different organs of living beings, differ from each other in a remarkable degree, as to chemical composition and configuration. Witness the illimitable diversities in plants and animals. Inorganic bodies, on the contrary, are remarkable, with few exceptions, for their great similarity of form and crystallization when their chemical composition is identical. It therefore follows, that there must be in organic or living bodies a peculiar power totally different from chemical affinities, which determines the configurations or forms of bodies not endued with life; and the influence of which produces the great diversity which organic forms of a similar chemical composition exhibit. It therefore follows, from the preceding acknowledged facts, that there are vast differences between organic and inorganic bodies.

"Let us next adduce further proofs of the validity of this conclusion. To effect this, we must notice the chemical composition of all the bodies in the universe, with which we are acquainted; we must examine the classifications of naturalists, and institute a comparison between organic and inorganic substances; between vegetables and animals, and between animals and man."

We have now enabled our readers to form

their own opinions on the execution of this great work, and have adduced ample attestation of its comprehensiveness. To those who feel interested in comparative and human physiology we strongly recommend the English version of Tiedemann; and if we may consistently, the elaborate lectures of Dr. Fletcher in our own pages.

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A NEW PRACTICAL FORMULARY

OF HOSPITALS, OR A

Collection of Formulae of the Civil and Military Hospitals of France, Germany, Italy, Great Britain and Ireland, &c., containing the Indication of the Doses in which simple Substances, magistral and official Preparations of the Codex are administered, the use of New Medicines, and general receipts on the art of prescribing. By M. EDWARDS, M. D., and P. VAVASSEUR, M. D., of the Hospitals of Paris—1834. Translated and augmented by M. RYAN, M. D. &c. &c.

(Continued from p. 439.)

Potion of the Hydro-sulphate of Antimony.
H. Militaires.

Rx. Antimonii hydro-sulphatis, gr. j;
Gummi tragacanthæ, gr. x;
Aque fontanæ, ʒ ix.

Fiat haustus.

As an expectorant.

Emulsion of the Hydro-sulphate of Antimony.
H. of Italy.

Rx. Hydro-sulphatis antimonii, gr. iv;
Mellis despumati, ʒ j;
Emulsionis simplicis, ℥j.

Misce. Cochl. amp. pro dosi.

Marmalade Expectorate de Zanetti.

Rx. Antimonii hydro-sulphatis, gr. iv;
Mannæ, ʒ vj;
Olei amygdalæ dulcis,
Syrupi scillæ,
—— polygalæ, ā ā ʒ ij.

Misce. Capiat cochl. min. secundâ quâque horâ.

BROWN SULPHURET OF ANTIMONY.

It possesses the same properties as the hydro-sulphate of antimony, and is employed in the same manner. It is not much used in France; but in England it is preferred to that medicine.

INTERNALLY. The same doses as the hydro-sulphate.

Antirheumatic Powder. H. of Germ.

Rx. Sulphuris antimoniatifusci, gr. j;
Pulveris glycyrrhizæ, gr. x.

Fiat pulvis.

Pectoral Pills. H. of Germ.

Rx. Antimonii sulphurettifusci, ʒ.
Gummi ammoniaci,
Extracti glycyrrhizæ, ā ā ʒ

Fiat massa, in pilulas granorum ij distri-
buenda, ex quibus sumat v—x quotidie.

Pectoral Pills. H. of Germ.

Rx. Antim. hydro-sulphatis, 3ss;
Gum. ammoniaci,
Extr. glycyrrhizæ, ā ā ʒ ss.

In pilulas gr. ij. divide, ex his sumantur
quinque vel decem quotidie.

Looch Pectoral. H. of Germ.

Rx. Sulphatisantimoniatifusci, gr. iv;
Mucilaginis acaciæ,
Mellis purificati, ā ā ʒ j.

Misce. Cochl. amp. pro dosi.

SULPHATE OF ANTIMONY.

Formerly employed as an emetic, exci-
tant and diaphoretic; but at the present day
it is scarcely ever prescribed, except in some
cases of scrofulous swellings and cutaneous
diseases.

INTERNALLY. Gr. xij—ʒj and even ʒj,
in suspension in an emulsion, or in pills.

Tablettes Antimoniâles de Kunkel. P. No. iv
—x daily.

OXIDE OF ANTIMONY AND ANTIMONIC
ACID.

M. Trousseau considers these the most
powerful antiphlogistics and counter-stimu-
lants. He assures us that he has found them
most efficacious in inflammatory affections
of the chest. [Later writers have declared
them to be useless. T.]

INTERNALLY. ʒj—iv, in emulsion or
pills in 24 hours.

The other preparations of antimony, such
as powder of Algaroth, glass of antimony,
diaphoretic antimony, &c., are scarcely ever
employed at the present day.

IPECACUANNA.

In small doses it produces vomiting and
sometimes alvine evacuations; but it also
possesses excitant and tonic properties,
which have a special action on the pulmo-
nary organs.

It is generally used to produce vomiting;
it is less certain, as an emetic, than the tar-
trate of antimony, but less irritating than
that medicine. Its use is much recom-
mended in the treatment of dysentery, croup,
and puerperal peritonitis, after the intensity
of the inflammatory symptoms has been di-
minished by blood-letting. It is also used
in very small doses to excite the action of
the stomach, and to stimulate the mucous
membrane of the bronchiæ in certain cases
of pulmonary catarrh, whooping cough, &c.

INTERNALLY. *Powder.* As an emetic, gr.
xv—xxx, in half a glass of tepid water.

As a stimulant, gr. i—vj.

Potion émetique avec l'ipecacuanha. P. (ʒi
aq. ʒ ix.; syr. ʒ j.) To be taken at three
doses, every quarter of an hour.

Potion d'expectoration composée. P. A spoon-

—tic, ʒ ss, every
—tant and dia-

phoretic, from gut. xx—xl, several times a day.

Syrup. P. ʒ ss—ij.

Pastilles d'ipécacuanha. P. No. iv—x.
Ipecac. ʒ iv, sach. ʒ xx. Muc. tragacanth. q. s.

An Emetic Powder. H. of Germ.

Rx. Pulveris ipecacuanhæ,
Sacchari, ā ā ʒj.

Divide in chartulas iv, de quibus sumat unam quartā quaque parte horæ, donec emesis supervenerit.

Powder of Ipecacuanha and Rhubarb. H. of England.

Rx. Pulveris ipecacuanhæ, ʒj;
—— rhei, ʒ ij.

Misce. The dose is gr. x—xx as an emeto-cathartic, and gr. iv—vj twice or thrice a day, as a diaphoretic.

The *poudre éméto-cathartique* of the Hôt. D. very much resembles the above. It is composed of ipecacuanha, ʒj, and rhubarb, gr. xij, which is given at one dose as an emeto-cathartic, and in divided doses as an excitant of the digestive tube.

Expectorant Powder. Hôt. D.

Rx. Pulveris ipecacuanhæ, ʒj;
—— scillæ, gr. xij.

Divide in chartulas xij quarum, sumat unam secundā vel tertiā quaque horā.

Pilules Nauséuses. H. of Italy.

Rx. Pulveris ipecacuanhæ, gr. vj;
Succi sambuci, q. s.

Fiant pilulæ vi, de quibus sumat unam secundā quaque horā.

Boluses of Ipecacuanha. H. de la Mat.

Rx. Pulveris ipecacuanhæ, gr. xvij—xxiv;
Mellis despumati, q. s.

Divide in bolos tres, capiat unum singulis semihoris.

As an emetic.

An Astringent Bolus. H. de Montp.

Rx. Pulveris ipecacuanhæ, gr. iʒ;
—— aluminis, gr. vj;
Syrupi papaveris, q. s.

Fiat bolus.

Employed in chronic diarrhœa.

Infusion of Ipecacuanha. H. of Germ.

Rx. Ipecacuanhæ contusæ, ʒ ij;
Aquæ, ʒ iv.

Boil till reduced to a half, and strain. Boil the residue twice in the same quantity of water, and add the three colatures together. It should be taken at three doses in dysentery.

[The compound powder of ipecacuanha or Dover's powder is a much better remedy in such cases. T.]

Infusion of Ipecacuanha. H. de Montp.

Rx. Ipecacuanhæ contusæ, gr. xv;
Corticis aurantii, ʒj;
Aquæ, ʒ vj;
Syrupi florum aurantii, ʒj.

Fiat infusium capiat cochl. amp. ex cyatho aquæ.

Before each repast, as a stimulant and stomatic.

Emetic Potion. H. des Ven.

Rx. Pulveris ipecacuanhæ, gr. xij;
Aquæ destillatæ, ʒ iv.

Fiat haustus.

Looch anisé avec le Sirop d'Ipécacuanha. H. des Ven.

Rx. Syrupi ipecacuanhæ, ʒj;
Linctus anisi, ʒ iv.

Misce.

Given to infants, to remove mucosities of the intestinal canal.

[The wine of ipecacuanha is preferable to the antimonial in bronchial diseases of infants, because the latter is too stimulating, more especially as most children labour under more or less gastro-intestinal irritation. The following syrups are highly beneficial in the catarrhal and bronchial affections of children.

Rx. Syrupi simplicis, ʒ xj;
Vini ipecacuanhæ,

Dosis ʒj urgente tussi.

In spasmodic cough or pneumonia, one minim of hydrocyanic acid and xx—xxx of comp. tinct. of camphor, may be added. In violent cases of pneumonia, when the usual remedies had failed, I have repeatedly prescribed for infants from a year and a half to two years of age, two drops of Scheele's acid in the above syrup, with decided advantage. A teaspoonful was given every half hour or hour, according to the urgency of symptoms. Dr. Marshall Hall and Dr. Elliotson prefer ipecacuanha to tartarized antimony in bronchitis. Dr. Sheridan and Dr. Osborne of Dublin have lauded this medicine in hæmoptysis. T.]

EMETINE.

The active principle of ipecacuanha, which is employed as an emetic, in the same cases as that medicine; its action is much more violent, consequently its use requires great prudence.

Subst incomp. The infusion of galls, &c.

INTERNALLY. Gr. ʒ—dissolved, or in pills.

Syrup of Emetine. F. de M. (Emetine, gr. iv.; common syrup, ʒi. Each drachm contains gr. 1-32 of emetine). ʒ ij—iv.

Emetic Potion. Magendie.

Rx. Emetinæ puræ, (solutæ in acido nitrico, q. s.) gr. i;
Infusi florum tilisæ, ʒ iij;
Syrupi albæ, ʒj.

Misce. Sumatur cochleare modicum quartā quā que horā ad emesin.

Lozenges of Emetine. Magendie.

Rx. Emetinæ puræ, gr. viij;
Sacchari, ʒ iv.

Fiant trochisci, gr. ix, capiat j, singulā horā.

Employed in *hooping cough*, *chronic pulmonary catarrh*, *chronic diarrhoea*, &c. (Each lozenge contains about gr. 1-45th of emetine).

COLOURED OR IMPURE EMETINE is also employed in the same cases; but as it is much less active it is generally administered in doses four times as strong. We should bear in recollection which of these two substances is employed.

Emetic Mixture. Magendie.

Rx. Emetinæ coloratæ, gr. iv.;
Infusi florum aurantii, ℥ ij;
Syrupi florum aurantii, ℥ ss.

Misce. Sumatur cochleare modicum singulâ semihorâ.

Lozenges of Coloured Emetine. Magendie.

Rx. Emetinæ coloratæ, gr. xxxij;
Sacchari purificati, ℥ ij.

Divide in trochiscos granorum, xvij.

The dose is one for children, and three or four for adults. Each lozenge contains 3-11ths of a grain of the emetine.

The *Sirop d'emetine coloree*, Magendie differs only from that of pure emetine in containing gr. xvj of emetine, to Oj of common syrup. It may be used with advantage instead of the sirop of ipecacuanha.

[Violine or emetine procured from the root of the *viola odorata*, is recommended by M. Magendie in diarrhoea. Doses gr. vj—xij. T.]

ASARABACCA.

A very energetic excitent, violent emetic, and sternutatory in nervous head ache. Not much employed at the present day.

INTERNALLY. Root. Powder, ℥j—3j.

Infusion. 3j—ij to Oij of water or wine.

Leaves. Powder. Gr. xij—℥ij.

Poudre sternutatoire, or de St. Ange. P. Pini, j of asarabacca, marjoram betony, flowers of may-lilly

Teintre. P. Gutt. xx—xxx. Not much used.

[Squill, sulphate of zinc, sulphate of copper, mustard seed and chamomile are also employed as emetics. The doses are described under the respective heads.—T.]

CHAPTER XIII.

MEDICINES GENERALLY EMPLOYED AS PURGATIVES.

A—DRASTICS.

COLOCYNTH.

In large doses, a violent irritant of the stomach and rectum; in small doses it is a very energetic drastic purgative. Its irritating influence on the rectum may be communicated to the uterus, and increase menstruation. Colocynth may be employed with advantage in passive dropsies, and when

it is necessary to produce a powerful action on the large intestines. In such cases, it should be mixed with eight or ten parts of an insoluble and inert powder, to diminish its violent action on the stomach.

Subst. Incomp. The fixed alkalies, the sulphate of iron, the nitrate of silver, the acetate of lead, &c.

INTERNALLY. Powder. Gr. iv—xi and even to ℥j, mixed with the powder of gum, or some other inert powder.

Extract. P. Grs. iv—xij, in pills, combined with calomel or some other purgative.

Purgative Bolus. H. of Italy.

Rx. Extracti colocynthidis, gr. ij;
Mellis despumati,
Pulveris glycyrrhizæ, ā ā q. s.

Fiat bolus.

Powder of Colocynth. H. of Germ.

Rx. Pulveris colocynthidis, gr. j to iij;
——— gummi acaciæ,
——— glycyrrhizæ,
Sacchari, ā ā gr. v.

Fiat pulvis catharticus.

Pills of Colocynth and Calomel. H. of Eng.

Rx. Extracti colocynthidis, 3j;
Hydrargyri submuriatis, gr. xvij.

Fiant pilulæ viij, ex quibus capiat unam, ad quatuor quotidie.

Decoction of Colocynth. H. of Germ.

Rx. Colocynthidis, 3ij;
Aquæ, Oj.

Coque per duodecimam horæ partem, cola et adde,

Etheris sulphurici, 3ij;
Syrupi corticis aurantii, ℥ ij.

Fiat potio cujus capiat cochleare bis vel ter in die.

In dropsies.

EXTERNALLY.

Irritating Suppository. H. of Germ.

Rx. Pulveris colocynthidis, 3ss;
Sodæ muriatis, 3j;
Mellis, ℥j.

Misce.

To be introduced in the rectum.

Purgative Pommade. H. de Montp.

Rx. Pulveris colocynthidis, 3j;
Adipis preparatæ, ℥j.

Fiat unguentum.

Used in frictions on the abdomen, in 3ij doses.

CROTON OIL.

In small doses, it produces alvine evacuations more or less abundant; in larger ones it irritates, in a violent manner, the mucous membrane of the intestines. It is used with advantage in obstinate cases of constipation, when the other drastics have proved ineffectual; when it is necessary to obtain prompt results, or when there exists an obstacle to the employment of an ordinary purgative, as is sometimes the case in tetanus.

nus, mania, apoplexy, &c. M. Andral found it efficacious in obstinate head-aches, asthma, dropsies, &c. It is also employed in the treatment of plumbers' colic. Very good effects have been obtained from its use in frictions, in cases in which tartarized antimony is used, but this acts more quickly, as in cases of chronic rheumatism, and tumours of the articulations, &c. The very violent action of this oil requires the greatest attention on the part of the practitioner.

INTERNALLY. Gut. j—iv and more, in ʒss of syrup, or in pills of bread.

Saxon d'huile de Croton. F. de M. (Croton oil, 2 parts; solution of caustic soda, 1 part). Gr. ij—iv, with syrup or in pills.

Cathartic Mixture.

Rx. Olei tigllii, gut. ij;
Mucilaginis acaciæ, ʒj;
Sacchari purific., q. s.

Fiat mistura.

To be taken in two, at some hours of interval.

Oleo-saccharat de Croton Tigllum. H. of Germany.

Rx. Olei tigllii, gut. j;
Micæ panis ʒj.

Divide into 8 packets, of which one should be taken every hour until purging is produced.

[Two or four drops may be added to the extract of colocynth with calomel, in cases of obstinate constipation. T.]

Purgative Pills of Croton Oil. H. of Italy.

Rx. Olei tigllii, gut. j;
Micæ panis, q. s.

Fiat pilula.

EXTERNALLY. In frictions, gut. iv on the umbilicus, as a purgative,

[It suddenly reddens the skin, and is advantageously added to the antimonial ointment, when this has failed. See *Antimony*. T.]

OIL OF SPURGE (EUPHORBIA LATHYRIS).

A very energetic purgative, which may replace with advantage croton oil, because its action is much less violent, and always very certain.

INTERNALLY. From gut. vj—x in an emulsion or in pills.

Purgative Lozenges. Bally.

Rx. Ol. euphorbiæ lathyris, m xl;
Chocolati pulv. ʒj;
Sacchari pur. ʒss;
Amyli pulv. gr. xij.

Divide in pastillos gr. ix.

One may be given to infants, and two or three to adults. A very convenient purgative.

Potion with the Oil of Spurge.

Rx. Olei euphorb. lathyris, gut. viij;
Pulveris acaciæ, ʒj;
Sacchari, ʒij;
Aquæ destillatæ, ʒiij.

Fiat potio, cujus capiat cochleare omni horâ donec alvus soluta sit.

CAMBOGE.

A very energetic drastic purgative, which frequently produces colic and purging, and in too large doses it inflames the stomach and the intestines. Nevertheless, it is employed with advantage when it is necessary to cause a powerful derivative in certain cases of dropsy and chronic cutaneous affections. It is frequently used by English practitioners; but not much employed in France. It may also be administered as an anthelmintic. The Italians consider it as a powerful counter-stimulant.

INTERNALLY. Powder. From grs. ij—vj, in pills or in an emulsive potion.

Powder of Camboge. H. of England.

Rx. Cambogiæ, gr. iij;
Sacchari, ʒj.

Fiat pulvis singulâ tertia quâque horâ sumendus, donec alvus responderit.

Bolus of Camboge. H. of England.

Rx. Cambogiæ, gr. x;
Potassæ tartratis, gr. xx;
Pulveris zingiberis, gr. iij;
Syrupi simplicis, q. s.

Fiat bolus.

Drastic Pills. H. of Italy.

Rx. Guttæ gambæ, gr. xij;
Succi sambuci,
Pulveris glycyrrhizæ, ā ā q. s.

Fiat pilulæ vj, quarum capiat unam tertis horis.

MEADOW SAFFRON.

In small doses it acts as a sedative, in more modified ones it is an energetic purgative, and at the same time a diuretic; in large doses it is a violent irritant of the gastro-intestinal mucous membrane. It is employed as a drastic in hydrothorax, anasarca, violent rheumatic pains. It is also used in small doses, to calm the pains in gout, &c. It is not much used in France; but in England it is very much employed.

[Sir C. Scudamore thinks it too freely used. T.]

INTERNALLY. Powder, from gr. j—iv, in pills.

Teinture. P. Gut. xv—xxv, in a potion.

Teinture de Colchique de Darmstrong. P. Gut. x ad xx in a potion.

Wine. P. ʒj—ʒss, and more progressively.

Oxymel. P. ʒij—ʒj, progressively, twice a day, in a mucilaginous mixture.

Honey. P. ʒss—j and more.

[The liquor colchici of Battley, may be given in doses, from m v—xx daily. T.]

Diuretic Mixture. H. of Germ.

Rx. Oxymellis colchici,
Ammonisæ acetatis, ā ā ʒij;
Aquæ destillatæ petroselinii ʒvj.

Fiat potio, cujus capiat cochleare, secundâ quâque hora.

Anti-arthritic Mixture. H. of America.

Rx. Vini colchici, 3 ij;
 Magnesiae subcarbonatis, 3 j;
 Aquae destillatae cinchonae, ā ā
 3 iij.

Fat mistura cujus capiat cochl. ampl. itertiā horā.

[Sir Charles Scudamore prescribes from m xx—xc of acetum colchici, combined with sulphate and carbonate of magnesia. Essay, April 1835. T.]

VERATRINE.

The active principle of colchicum, &c., which acts in large doses in the same manner as the most energetic irritating poisons in small doses; it is employed as a drastic purgative. Its action is very prompt. As an external application, it appears to be useful in the treatment of gout, anasarca, chronic rheumatism, and other cases in which the tincture of colchicum is recommended.

[Recommended in neuralgiae, but found to fail. T.]

INTERNALLY. As a purgative, gr. 1-12th to ½, in pills.

Alcool de vératrine. F. de M. (Veratrine, gr. iv; alcohol, 3 j). Gut. x ad xxv, in a potion.

Pills of Veratrine. Magendie.

Rx. Veratrinæ, gr. ½;
 Gummi acaciæ, ʒj;
 Syrupi gummi, q. s.

Divide in pilulas vi, quarum capiat unam ad tres in die.

These pills replace with advantage those of Bacher. Each of them contains 1-12th of a grain of veratrine.

In anasarca, dropsy, &c.

EXTERNALLY.

Alcool de Veratrine. F. de M.

Veratrine gr. iv, alcohol 3 j. Dose m x—xxv in a draught. Used in frictions.

Pommade of Veratrine. Magendie.

Rx. Veratrinæ, gr. iv;
 Adipis, 3 j.

Fiat unguentum.

M. In frictions, in cases of anasarca, gout, &c.

[Sabadilline is not preferable to veratrine, according to Magendie. T.]

SULPHATE OF VERATRINE.

It possesses the same action, and is used in the same manner as veratrine.

INTERNALLY.

Solution de Vératrine. F. de M. (Sulphate of veratrine, gr. j; distilled water, 3 ij). 3 j—iv, in a potion. The preparation replaces with advantage the *Eau Médicinale de Husson*.

BLACK HELLEBORE.

One of the most violent drastic purgatives. Not much used at the present day. Nevertheless, sometimes employed in dropsies and certain diseases of the skin. Its use requires great prudence.

INTERNALLY. Powder, gr. x—ʒj, in pills.

Infusion. 3 ij in ʒij of boiling water, of which 3 j should be given every four hours.

Extract of Hellebore. P. Gr. iv—x in pills.

Tonic Pills de Bacher. P. Gr. j—ij daily.

Tincture. P. Gut. xx—3 ss, and even to j, progressively, in a proper vehicle.

The WHITE, GREEN, and FETID HELLEBORE, act in nearly the same manner. They are not used at present.

ELATERIUM.

A very violent drastic purge, even in small doses. Formerly used in the treatment of ascites and dropsies in general. Its use requires great care.

[The extract may be given to children under three years of age, labouring under dropsy, in doses of one sixteenth to one twelfth of a grain, combined with calomel, &c. T.]

INTERNALLY. Powder, gr. ½, every hour until purging is produced, either in pills or suspended in an emulsion. The dose ought never to be carried higher than gr. vj.

Compound Powder of Elaterium. H. of Eng.

Rx. Extracti elaterii, gr. iv;
 Potassæ tartratis, ʒv;
 Pulveris zingiberis, ʒj.

Dosis gr. v. ad xx. (30 grains contain 1 gr. of elaterium.)

[Compound Powder of Elaterium. Ryan.]

Rx. Extracti elaterii, gr. i;
 Hydrarg. submur. gr. xij;
 Pulv. cinnam. comp., ʒj;
 Sacchari purific., 3 ss.

Tere intime et divide in ch. xij, quarum capiat unam ter in die.

I have repeatedly prescribed this powder for children of five years of age affected with anasarca, ascites, and even hydrothorax, after scarlatina, with success. The dose must be diminished if the bowels act too freely. T.]

ALOES.

In small doses, a bitter tonic; in large ones, an energetic purgative; but its effects are not manifest for some time after its administration, and it acts principally on the large intestines. It is employed with advantage in cases of habitual constipation, arising from atony of the intestinal canal, in jaundice, chlorosis, scrofulous affections, hypochondriasis, and, in general, every time that a slight purgative effect is wished to be produced, and secondly, a tonic effect. It is given to persons predisposed to cerebral congestion, on account of its action on the rectum; which may be also extended to the uterus, and it is sometimes used to excite the flow of the menses. It ought not to be administered to persons affected with hemorrhoids. It is also recommended

as an anthelmintic; but it cannot be depended on.

INTERNALLY. *Powder.* As a tonic, gr. j—iv.

As a purgative, grs. vi—℥j.

Pills of Aloes and Soap. P. Grs. x—xv.

Pills of Rufus. P. As a cathartic, ℥j—ij.

As a stimulant, grs. x—℥j.

Pills of Aloes and Guaiac. P. Gr. vj—xij.

Pilules Bénites de Fuller. P. No. ij, twice a day.

Pilules Hydragogues de Bontius. P. From gr. xij—xviiij.

Compound Electuary of Aloes. P. ℥j—3j.

Opiate Méésentérique. P. 3ss—ij.

Aqueous Extract. P. Gr. vj—xij, in pills.

Tincture. P. Gut. x—3ss, in an appropriate potion.

Compound Tincture of Aloes. P. 3j—iv.

Compound Powder of Aloes. H. of Eng.

Rx. Alōes spicati, ℥iv;

Cinnamomi, 3j.

Doses gr. x ad ℥j.

Compound Aloetic Pills. H. of England.

Rx. Alōes spicati, 3ss;

Extracti gentianæ, 3ij;

Olei carui, ℥j;

Syrupi auranti, q. s.

Fiat massa.

The dose, gr. x—xv daily.

Emmenagogue Boluses. H. of Italy.

Rx. Extracti alōes, gr. viij;

———— sabinæ, gr. vj;

Pulveris glycyrrhizæ, q. s.

Divide in bolos vi de quibus, capiat unum tertia quaque hora.

Aloetic Pills. H. des Ven.

Rx. Alōes spicati, 3j;

Pulveris rhei,

Sulphatis potassæ, ā ā 3iv;

Syrupi chichorii, q. s.

Divide in pilulas, gr. vi, de quibus, capiat duas vel tres in die.

As a purgative.

Laxative Electuary. H. of Italy.

Rx. Extracti alōes, gr. viij;

Potassæ supertartratis, 3ij;

Mellis, q. s.

Misce, pro una dosi.

Tincture of Aloes and Myrrh. H. Militaires.

Rx. Tincturæ alōes,

———— myrrhæ, ā ā, p. e.

Misce.

Dosis ℥j ad 3j bis vel ter in die.

As a stomachic and excitant.

Aloetic Mixture. H. of Germ.

Rx. Extracti alōes,

———— myrrhæ, ā ā 3j;

Potassæ supertartratis, 3ss;

Aque menthæ piperitæ, 3vj.

Fiat potio, cujus capiat cochleare mane nocteque.

To excite the hemorrhoidal flux.

EXTERNALLY.

Anthelmintic Suppositorium. Swediaur.

Rx. Alōes spicati, 3ss;

Sodæ muriatis, 3ij;

Farinæ, 3ij;

Mellis, q. s.

Fiat suppositorium.

[The compound decoction and tincture of aloes are favourite medicines with many practitioners. The first is often combined with the compound iron mixture. Aloes is the chief ingredient in the popular aperient called pill of cochises (cochées). These and other aloetic pills are injurious during uterine gestation. T.]

JALAP.

In moderate doses jalap is a purgative, whose action is principally carried to the small intestines; in large doses it is a strong irritant of the gastro-intestinal mucous membrane. It is a medicine very much employed on account of its energetic action, and its low price. It is used in costiveness, mania, worms, and as a hydragogue in dropsies. It is generally united with some other purgative [as calomel, supertartrate of potass, and a drop of essential or some aromatic oil should be added to prevent griping. T.]

INTERNALLY. *Root. Powder.* Gr. xij—3ss, in pills, or suspended in an emulsion.

Cathartic Powder. P. Gr. xviiij—℥j.

Compound Tincture of Jalap. P. ℥j—3j, in an emollient vehicle.

This is much stronger than the British preparation.

Syrup of Jalap. P. 3ij—3ss.

Resin. Powder. Gr. ij—x, in pills, or better, suspended in an emulsive potion. Not so much used as the root. It gripes violently.

Purgative Emulsion. P. A spoonful at a dose.

Savon de Jalap. Resin of jalap, 8 parts, almond soap, 16 parts, alcohol, q. s. P. Gr. x—xv, in pills.

Anthelmintic Powder. Hdt. P.

Rx. Pulveris jalapæ, gr. xxx;

———— rhei, gr. vj;

Hydrargyri submuriatis, gr. ij.

Divide in pulveres duas, capiat unam singulis horis.

Purgative Powder. H. de la Mat.

Rx. Pulveris jalapæ, gr. ij;

———— rhei,

———— cinnamomi, ā ā gr. i.

Fiat pulvis.

Given to children as a purgative.

Purgative Powder with the Essential Oil of Orange.

Rx. Pulveris jalapæ, 3iv;

Potassæ tartratis, 3j;

Sacchari, 3ijss;

Olei aurantii, 3ss.

Make an alco-saccharat, to which add q.

first the salt of potassa, and then the jalap. The dose is ʒ ij—iij in Oj of orange water. It is a very agreeable purgative.

Cathartic Boluses. H. Militaires.

Rx. Pulveris jalapæ, gr. xx;
 ——— scammonii, gr. viij;
 Mellis, q. s.

Fiant boli iv.

Purgative Pills. H. of Italy.

Rx. Pulveris jalapæ,
 Sacchari, ā ā ʒj;
 Pulveris rhei, gr. xxx;
 Syrupi chichorii, q. s.

Divide in pilulas xxiv, quarum capiat iv ad viij pro dosi.

Purgative Biscuits. H. of Montp.

Rx. Pulveris jalapæ, ʒj;
 Farinæ, ʒj;
 Ova, No. ij;
 Sacchari, ʒj.

Make into three biscuits. A very commodious purgative for children.

Purgative Jelly. H. of Germ.

Rx. Pulv. jalapæ, ʒss;
 Gelatin. mali cydonii, ʒiv;
 Alcoholis, ʒvj.

A very agreeable purgative.—Dose, ʒj.

Jalap Potion. H. de la Ch.

Rx. Pulveris jalapæ, ʒss;
 Decocti chichorii, ʒiv.

Misce.

To be taken in two doses.

Purgative Emulsion. H. Militaires.

Rx. Pulveris jalapæ, gr. vi;
 Emulsionis amygdal., ʒvj.

Misce.

Purgative Potion. Hôt. D.

Rx. Tincturæ jalapæ comp., ʒj;
 Syrupi rhamni, ʒss;
 Decocti chichorii, ʒiv.

Fiat potio.

Employed in the treatment of certain dropsies.

Purgative Potion, or Medecine Commune. H. des Vén.

Rx. Pulveris jalapæ, gr. xxx;
 Sulphatis sodæ, ʒv;
 Syrupi mellis, ʒj;
 Decocti chichorii ferventis, ʒvi.

Misce.

To be taken at several doses.

[The compound powder of jalap, combined with calomel, squill, and digitalis, is a valuable remedy in dropsies. T.]

SCAMMONY.

A very energetic drastic purgative, whose action is very prompt. It is employed in small doses, in obstinate cases of constipation, caused by atony of the intestinal canal, and especially in passive dropsies; and also to produce abundant alvine evacuation.

INTERNALLY. Powder. Gr. j—vj, and gradually increased to xij and xv.

Purgative Emulsion. P. ʒij—iv.

Tablettes de Scammonée et de Séné composées. P. ʒj—ij.

Teinture. P. ʒj—3j, in a potion.

Sirop. P. ʒj—iv, in a potion.

Electuaire Diaphœnix. P. ʒss—ij.

Compound Powder of Scammony. H. of England.

Rx. Pulveris scammonii,
 Extracti jalapæ, ā ā gr. x;
 Pulveris zingiberis, gr. iij.

Divide in chartulas iv, quarum capiat duas vel tres quotidie.

Powder of Scammony and Calomel. H. of England.

Rx. Pulveris scammonii, ʒj;
 Hydrargyri submuriatis,
 Sacchari, ā ā ʒss.

Fiant chartulæ xxviij, de quibus sumat unam vel duas quotidie.

Purgative Powder. H. of Eng.

Rx. Pulveris scammoniae, gr. v;

——— rhei, gr. xv;

Ammoniae subcarbonatis, gr. vj.

Misce.

To be taken at a dose.

Purgative Oil. Swédiaur.

Rx. Scammonii, ʒj;
 Olei amygdalarum, ʒj.

Dissolve by a gentle heat. The dose is ʒss and more, in an emulsion. It is a gentle purgative.

Purgative Electuary. H. of Germ.

Rx. Scammonii,
 Zingiberis, ā ā ʒss;
 Olei caryophyll., gr. xij;
 Syrupi corticis aurantii, q. s.

Misce.

The dose is ʒj—ij.

TURBITH (CONVOLVULUS TURPETHUM).

It has the same action, and is used in the same cases as the preceding substance. It is scarcely ever used at the present day.

INTERNALLY. Powder. P. Gr. x—ʒj.

Decoction. ʒj—ij in ℥j of water. A glassful should be taken at intervals, until purging is produced.

SENNA.

When administered in large doses it powerfully irritates the gastro-intestinal mucous membrane; in moderate doses it is an energetic cathartic, and one very frequently employed. It is not often administered alone, but generally combined with some mild purgative, such as the neutral alkalies, tamarinds, manna, &c. It is customary, in England, to join with it some aromatic substance, such as ginger, carraway, cardamom, cinnamon, &c., to obviate the griping it frequently produces; a practice which is very advantageous.

[This is essentially necessary in cases of children. T.]

(To be continued.)

**The London Medical
AND
Surgical Journal.**
Saturday, May 9th, 1835.

**NEW REGULATIONS OF THE RHABAR-
BARIANS.**

THE new regulations issued by the Rhabarbarians will be very differently viewed by opposite parties in the profession; one regarding them with complaisance, as conferring additional respectability on the Company—the other deprecating them, as tyrannical to the medical student. We cannot say that we agree with either. Taking the regulations simply as a further provision for the good education of medical practitioners, we think they are entitled to praise; and we give it heartily, well pleased at finding an opportunity of commending where we generally find room only for censure. It is but justice to the Rhabarbarians to admit, that the course of education prescribed by them is far superior to that insisted on by either of the London Colleges. Why then are we incessantly denouncing the Apothecaries' Company as the most odious and contemptible of medical institutions? We answer, because notwithstanding the improvements it has effected in medical education, it is still based on the degradation of the profession; its very existence is interwoven with the worst of the many evils that beset the general practitioner; its main object is to perpetuate that union of a liberal profession and a paltry trade, which lowers medical practitioners in the eyes of the public, which engenders a vile subordination of one class of the profession to another, and drowns the free and generous spirit of science in the low arts of a sordid and barely honest species of traffic.

Again, while we give the Company full credit for their attempts to extend the acquirements of their licentiates, we must protest against the members of that company as competent judges

of the qualifications of candidates. The examiners are frequently men who have received their own education behind a druggist's counter, who are obliged to learn their lesson for the occasion, and who are precisely as fit to conduct a medical examination, as we are to teach Sanscrit.

Lastly, we protest against the intolerable insolence of a set of illiterate tradesmen pretending to examine graduates in medicine, and members of colleges. It is much the same thing as if men in orders, even though Doctors in Divinity, were compelled to pass an examination before a board of parish clerks, ere they were permitted to accept a living, or to enter a pulpit.

Now we will give the Rhabarbarians a piece of advice—not in irony, but in good will; and we assure them they will be obliged to follow it, some day or other, whether they like it or not. Either let them cease to be a medical body altogether, and, restricting themselves to pharmacy, supply the public with a sufficient number of well educated *pharmaciens*; or let them become a medical body in good earnest; with a view to which, we would recommend them to have an auction without loss of time, at the emporium in Union Street, and sell off all the jalap, prometheans, pink-saucers, tooth-brushes, and other useful and ornamental articles to the highest bidder, strongly dissuading all their alumni from ever dealing in the like wares.

If, in addition to all this, they would include surgery in their otherwise very respectable *curriculum*, their diploma would be decidedly the most valuable that is given in London. They might thus, perhaps, have the honour of forming the nucleus of the One Faculty which must ere long be established; and they would, at all events, attain a decided ascendancy over the twelfth century men—the monkish physicians of Pall Mall, and the barber-surgeons of Lincoln's Inn.

PARISH JOBBING AGAIN.

To the Editor of the London Medical and Surgical Journal.

SIR—Belonging to a Society containing amongst the rest a few members of the medical profession, your journal is one of the works taken in; and although not professional myself, I generally run through its pages, to see if it contains any general article, when I found one, in the number for last week, page 408, headed "Parish jobbing," and was so forcibly struck with the justice of your observations, and the degrading manner in which parochial elections are carried on, as well as the party-political feeling now displayed, that I am induced to forward you another instance thereof, first assuring you that I am not at all interested for or prejudiced against the two individuals concerned, but actuated purely from a desire to see the profession and all professional appointments conducted with justice and impartiality, as well as to render a just tribute to an ill-used and highly talented, although a young member of the profession.

The late Mr. C. W. Wright held the appointment of surgeon-apothecary to the large parish of St. Pancras for some years (testimonials from the College and Hall being indispensable necessities for the situation), and when Mr. Dillon, the surgeon, resigned, he became a candidate for this higher office—natural enough, for every man wishes to better his condition in life. He was opposed by several candidates, and among the rest Mr. Delisser, who at that time, although in private practice, was not a licentiate of the Apothecaries' Company; but by some means or other, the select vestry presumed he was qualified, or he forgot his certificate, and they took it for granted that he had passed; be that as it may, he was allowed to stand at the election, but was unsuccessful; Mr. Wright was elected, and things went on smooth. Now comes the point I wish to allude to particularly.

Mr. Wright had a pupil, Mr. Henry Bird, of Kentish Town, who to my certain knowledge, from opportunities I then had of witnessing his unremitting attention, was both skilful, assiduous, and a well-disposed young man. He took advantage of the opportunities that were afforded him in the practice of the infirmary, containing two hundred beds, with a lying-in ward and infant nursery, under the instruction of that able physician Dr. Roots, and many thousands of out patients annually, and where in conjunction with attending his lectures first at St. Bartholomew's Hospital, and afterwards at the London University, he spent the whole of eight years; from these opportunities it may be presumed he acquired a good practical knowledge of his profession.

I have made this remark, not as a puff,

but merely to show that the above, in conjunction with his diploma from the College and Hall, proved his capability to undertake any situation. The select vestry were so satisfied with his conduct and abilities, that they appointed him resident medical officer to the Cholera Hospital, which office he filled with credit to himself, and benefit to the parishioners at large; as testimonials from Government and the Board of Health testify.

Mr. Wright, about a year and a half or two years ago, being attacked with consumption, found it impossible to attend to his duties, which Mr. Bird kindly undertook for him, and which he performed until the death of the former, last autumn.

Before the body was quite cold, Mr. Delisser, a non-resident in the parish, had his circulars out, and commenced canvassing for the situation. Mr. Bird wrote to the directors, announcing the death, and his intention to apply personally in proper time, thinking they would have the decency to defer making any arrangements until the funeral had taken place, and offering, with their permission, to continue the duties until his successor was appointed, which they desired him to do; and although they knew Mr. Bird had to make arrangements for the funeral, to attend the duties of the office, and was residing at the deceased's house, the board, for private motives, actually fixed the day of election close upon the day of the funeral, without even giving him any notice thereof; and only a few days previous to the election was he aware of it, and was then obliged to forego all personal respect to his deceased friend, and to commence his canvass without delay.

On the day of nomination there were five candidates, who were all examined as to their testimonials, and were all found correct, although Mr. Delisser, from some cause or other, did not produce his certificate from the Hall; however they all stood the election, and the question was asked, "Were all the candidates aware that they must be prepared to reside in the parish?" All answered "Yes." Party feeling ran high at this time; the other candidates divided Mr. Bird's interest, and Mr. Delisser was elected.

I thought Mr. Bird exceedingly ill-used, and was determined to see if Mr. Delisser was a licentiate of the Apothecaries' Hall, where I went, and found he had lately qualified, having at all previous elections deceived them as to the possession of the necessary qualifications.

During his election he stated that Mr. Bird was too young, when actually the latter was the older qualified practitioner of the two.

But Mr. Editor, this was easy to be accounted for: Mr. Murphy, the Pancras radical, has a tail at the vestry, who are obliged to vote as this rejected candidate for the borough of Marylebone orders, and Mr. Delisser was a friend of Mr. Murphy's, and was on the hustings at his unsuccessful trial

for a would-be M. P., hollowing out "Murphy for Marylebone;" and for this reason Mr. Murphy ordered his tail to vote for his friend. Now this is not all; Mr. Delisser has a surgery in the parish, but he still resides out of it; and although some months have elapsed since the appointment, not one of the vestry have yet thought fit to raise a word on the subject.

This I consider as one of the now-too-common acts of injustice to persons, from political motives, that ever came before the public; and I am only acting fairly in sending them to you, and trust you will lay them before the public. I remain sir, a well wisher to the profession.

LONDINENSIS.

SAINT PANCRAS, MIDDLESEX.

Day of 183

SIR,

You are requested to attend

of Agent
To MR. DELISSER, Surgeon, No. 1, Woburn Place, Russell Square.

N. B. All patients capable of going abroad, must attend on the surgeon in person, between 9 and 11 in the morning, and take with them cups and bottles for their medicines; and those incapable of attending must send for the same at the time before mentioned*.

OBSERVATIONS ON VERSION.

To the Editor of the London Medical and Surgical Journal.

SIR—It is a rule laid down by the majority of writers on midwifery, in breech or foot presentations, that as soon as the former part has passed the os externum, we should gently turn the back of the child towards the abdomen of the mother. This is the general

* Here is another example of gross parish jobbing. A surgeon, non-resident in the parish, is elected in preference to many residents, and especially to a gentleman who performed the duties of parish surgeon during the illness of the late surgeon, with satisfaction to the vestry, and the greatest credit to himself. The vestry of St. Pancras ought to be ashamed of themselves. If any tradesman amongst them, for example, Mr. Murphy, who we believe is a coal merchant, or any butcher, grocer, &c. was excluded by his brother vestrymen from supplying his wares to the workhouse, and an individual from a neighbouring parish preferred, such excluded person would be most vociferous about the manner he had been treated, but he cannot see why a surgeon should feel like himself. Such is the vestry wisdom of St. Pancras.—ED.

direction, or if I misinterpret, it is because it is laid down so vaguely that it is very likely to lead to error in practice.

The rule appears to me incorrect, for at the moment the breech is expelled, I presume the head is situated above the brim of the pelvis, and if we then turn the child as directed, we shall place the chin upon the promontary of the sacrum, the occiput upon the pubis, or the reverse. The shoulders too will be put in an unfavourable position for expulsion, being placed transversely to each of the tubera ischii. In cases where the head has passed the outlet, and some little delay has occurred in the passing of the shoulders, I have more than once attempted to place them in the most favourable position, by turning the head, when I have found nature essaying the turn in an opposite direction, and perseverance on my part would have thwarted her intention. From this fact, I infer that in presentations of the lower extremities, to place the back of the child (if practicable) towards the pubis, immediately the breech has passed the os externum, is to place the head and shoulders in the most unfavourable posture for passing the parts in which they are about respectively to be engaged; or if the attempt fail, to interrupt the efforts which nature is making to turn the body in an opposite direction, thus prolonging the labour, and rendering the chance of saving the child much less.

It appears to me that authors on the practice of midwifery only intended to inculcate the propriety of giving the body of the child, in its descent, a certain bias or inclination, as it were, to turn in a proper way at the time the shoulders pass the outlet; which may be right: but I am convinced that generally the rule has been laid down so vaguely, that were it followed to the letter, we should (nolens volens) immediately the breech is expelled, turn the back of the child towards the pubis, and the consequences would be, I believe, what are stated above.

The importance of the subject is the only excuse for sending this paper; and allow me to add, the hope of drawing some instructive remarks from you, or some one of your able correspondents. I am sir, yours &c.,

JOHN C. W. DYER.

Foreign Medicine.

Luxation of the Knee.

BARON LARREY addressed the following reflections on this accident to the Academie de Medecine at its sitting, April 14th. He first remarked upon the anatomical circumstances which render the knee joint so firm, and particularly insisted on the crucial ligaments, which he compared to the cross hands that keep the equilibrium of the body of a vehicle upon the carriage. Luxation, nevertheless, does sometimes take place. The first kind is extremely rare, if indeed it

exists at all, because the articular surfaces of the bones forming the joint are so extensive that it is almost impossible they should altogether lose their mutual connection, without the laceration of the principal ligaments; such a luxation would demand immediate amputation, so great would be the constitutional derangement consequent on it. The incomplete luxation is not so serious, and the extent of mischief will be proportionate to that of the displacement of the bone and the idiosyncrasy of the patient; the crucial ligaments are however necessarily ruptured. In other respects, such luxations are easily recognized and reduced: but every effort must be made to reduce the inflammatory symptoms as quickly as possible.

For this purpose, the leg must be speedily reduced and placed in a strictly straight posture: cupping immediately practised around the knee, which is afterwards to be enveloped in thin compresses steeped in a tonic glutinous fluid, such as white of egg beaten up with wine or camphorated vinegar, and the whole supported by a bandage somewhat tightly drawn. The immovable apparatus (such we presume as is used in fractures of the neck of the femur) is then applied and maintained until an ankylosis of the knee takes place. This is absolutely necessary to the perfect cure of the patient; for without it he would be liable to lose his balance on the slightest deviation from the straight line—the crucial ligaments meantime never uniting. Leeches and emollient remedies applied after the reduction are apt to favour the swelling, and accelerate the inflammation and suppuration of the circumjacent white tissues, whereas compression assists resolution and precludes such consequences.

Several incomplete luxations, treated at the Hôpital du Gros-Caillou, and at the Hôtel des Invalides, prove the necessity of establishing this ankylosis in all cases. One individual, Charles Hubert, aged 62, who had an incomplete and scarcely visible dislocation, being unwilling to submit to the application of immovable apparatus during the whole period required for ankylosis, is now unable to walk without crutches. Had this apparatus been applied in Benjamin Constant's case, the chronic inflammation which fixed in his knee, and contributed not a little to his death, might have been avoided.

M. Larrey does not believe in the dislocation behind, although this is the most easily effected. Complete luxation is impossible, without transverse fracture of the knee-pan, rupture of the tendon of the knee-pan and the tendons of the flexor muscles of the leg, or fracture of the bony projections to which they are affixed. The deformity in incomplete dislocation is frightful; flexion of the leg on the thigh is impossible, unless the tendon of the patella has been broken.

The dislocation of the tibia, anterior to the femoral condyles, is much more difficult,

and even impossible, on account of the disposition of the parts entering into the formation of the joints to each other. Lateral incomplete luxations are most frequent; but M. Larrey is not aware of any well grounded instances of complete luxation in that direction—and the reasons for which are obvious.

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Case of Hydrocephalus, in which the Fluid was withdrawn by Operation. By S. S. Allison, M. D.

ON the 23d June 1834, I was requested to visit Robert Cunningham, aged 5 months, son of a fisherman residing in Prestonpans. He had from the period of his birth inclined his head to a side, but appeared in perfect health in other respects, till about three months ago, when it was observed that his head was swollen, and more especially at certain spots; that he was affected with restlessness, frequent fits of crying, rolling of the eyes, cough, and emaciation.

The head, properly so called, is of enormous size, and sinks the small and emaciated face into striking insignificance. Its circumference is $20\frac{1}{2}$ inches, and a line drawn from ear to ear measures $12\frac{1}{2}$ inches. The parietal bones are far asunder, and between them on pressing, a sensation is felt as of water under the scalp, and the right side of the forehead is more prominent than the left.

The eyes appear to project more than usual; part of the sclerotic tunic of the upper surface of the balls is constantly visible, and the pupils are quite sensible to light. He takes little food, is almost constantly awake, and, from the increasing emaciation, and from the present rapid progress of the disease, it is obvious that death must soon be the result unless speedily checked.

To prevent all misapprehension, it may be mentioned, that fits, vomiting, and other symptoms that often attend *hydrocephalus*, have at no period been observed.

Calomel and compound powder of jalap have been ordered in small doses; and the propriety of withdrawing the fluid by an operation has been suggested to the parents, as the only measure in the present state of medicine that affords any chance of recovery.

24th. Bowels are open, and he appears altogether more at ease than for some time previous. Medicine to be continued.

26th. This day about 1 P.M. in presence of my partner, Mr. Cunningham, surgeon in Ormiston, and the friends of the child, the head was again measured, and found to correspond with the dimensions formerly given. The point of a small cylindrical trocar was then rested on the right side of the anterior fontanelle, and gently introduced into the cavity of the head, in a direction obliquely forward and outward. When the trocar had penetrated about half an inch, water appeared at the canula, and the stilette was withdrawn, to give egress to the fluid, which immediately ran off in a stream with considerable force and

rapidity. As the fluid escaped, the bones sunk under the hands, and the scalp, before tense, became loose and folded upon itself. The fluid was still flowing, though with less rapidity, when it was deemed prudent to close the wound, lest any bad effects should follow the sudden diminution of pressure on the brain. Adhesive plaster was applied over the wound, and the bones and scalp were retained firmly in their situation by a bandage and cap.

During the operation he did not cry much more than usual. He was laid in his cradle; quiet was enjoined; cow's milk diluted with water was ordered to constitute his diet; and wine and other spirituous liquors were prohibited.

10 P. M. He is reported to have been restless, and to have vomited a little, but he is free from fever, and has not been affected with fits and startings. Upon wine being again prohibited, occasion was taken to inquire if any had been given, when it was acknowledged by the mother that a small quantity had been administered "out of a cup" because, she added, he appeared faint.

27th. Since last report he has not been more restless than before the operation, and has not vomited, although a disposition to it has been observed. The eyes move freely, are certainly less prominent than before, and less of the sclerotic tunic is observable. The pulse is natural; the pupils sensible; the bowels are open, and the secretion of urine natural.

Upon measuring the fluid taken from the head, it amounted to nine ounces, two drachms, fluid measure, and, adding to that, for what was lost during the operation, and what issued from the wound shortly afterwards, two ounces, which appears a moderate allowance, the whole fluid evacuated may be estimated at eleven ounces. The fluid is transparent and almost colourless, having only a slight green tint, scarcely observable.

28th, noon. He has been very quiet since last report, and has slept three hours during the night, a longer period of uninterrupted sleep than he has enjoyed since the commencement of the complaint. The eyes are bright, active, and sensible to light, pulse 120; skin cool and tongue moist; he has had three natural evacuations from the bowels; has taken greedily some milk and water; and coughs little. The bandages and pillows are wet with fluid which has issued from the wound, the amount of which it is difficult to specify; but five ounces must be a moderate computation. The head is much smaller than before the operation, and is very uneven on the surface, with the folding of the scalp. Its dimensions were taken, but are lost.

29th, noon. At an early hour this morning he became very restless, vomited, cried much, and was affected with rigidity of one of the arms. The pulse is strong, and about 140; the tongue white and dry, and frequent-

ly protruded beyond the lips; bowels continue open; swallows milk and water greedily, and sucks the nipple occasionally. No more water has issued from the head, and its dimensions are as follow:—Circumference of head, 18 inches; from ear to ear over the crown of the head, $11\frac{1}{4}$ inches. The eyes move incessantly in the orbit, and the pupils are very sensible. A leech to be applied to the temple, and a blister to the *occiput*.

8 P. M. He continued very restless, tossed his arms and legs, and the tongue was protruded at short intervals till about 6 o'clock, when he became quiet. The eyes are less active, and the pupils contract upon exposure to the light; the pulse considerably quicker than at noon, and the bowels continue open.

30th. Soon after last report he again became restless; while the limbs were convulsed, and the tongue protruded. These symptoms continued to recur at short intervals till 4. A. M., when death took place.

July 1st. This day, in presence of my partner Mr. Cunningham, the head was examined. It appeared about the same size as when last measured, and the same feeling of fluctuation, that was experienced previous to the operation, was again felt. Previous to exposing the brain to view, an opening was made through the anterior *fontanelle* with the point of a scalpel, through which there immediately issued about ten ounces of fluid slightly tinged with blood. No trace of inflammatory action could be detected on the scalp in the vicinity of the wound, nor at the corresponding parts of the brain and its membranes. In the lateral ventricle of the right side was found a small quantity,—about half an ounce—of a white opaque fluid, and in the left fully more, and of a colour inclining to yellow, and altogether much resembling a mixture of purulent fluid and water, with albuminous flakes. The walls of the lateral ventricles were rather unusually soft, but, on the whole, did not present marks of great disorganization. The base of the brain presented no appreciable signs of disease, and the nerves proceeding therefrom appeared perfectly sound.

Feeling satisfied that my treatment of this case was justified by its circumstances, and that it was proper to make an attempt for the life of the patient, I publish the details, to give a practical demonstration of my belief in the opinion, that it is not from the knowledge of successful events only, but also of the unsuccessful, that a right estimate is to be obtained of the value of our measures.

The operation was undertaken under the impression that the fluid was exterior to the brain; that the lateral ventricles were free from water; and that their walls, and indeed, the whole cerebral mass, were very little, if at all, disorganized; an opinion substantiated by the state of the parts on examination after death. It is in such a case,

and in such only, that the evacuation of the fluid seems calculated to afford any chance of cure, and in which, therefore, it would be prudent to practise it. When there is merely a collection of fluid on the exterior of the brain, it appears as likely that recovery would follow its removal, as the evacuation of the water in the forms of hydrothorax, unconnected with organic disease, were it not for the greater delicacy and importance of the structures affected by the operation.

Anasarca is sometimes the effect of a derangement of the functions of the vascular system, totally unconnected with any organic lesion; and it will perhaps be allowed, that at least some cases of external *hydrocephalus* also owe their origin to functional derangement of the vascular system of the membranes covering the brain. Since such forms of anasarca are often cured, there is good reason to believe that the said forms of *hydrocephalus* might be as often cured, were it not for the danger of the operation necessary for the evacuation of the fluid in the meantime. The correction of the fault of the vascular system to which anasarca owes its origin, prevents the further effusion of fluid in the cellular tissue; and may not the same correction prevent a further effusion from the membranous coverings of the brain?

The principal danger to be apprehended from the operation is inflammation of the brain and its coverings. Yet I am not aware that it has existed in the majority of those cases in which death has followed this measure; and it is known, that at least two patients have ultimately survived its performance, one of which was treated by Dr. Conquest of London, and the other by Mr. Russel of Aberdeen.

That such inflammation was the cause of death in this case, I admit, from consideration of the symptoms shortly before dissolution, and from the appearance of fluid with albuminous flakes in the lateral ventricles, along with a slight softening of their walls, observed at the examination. But to conclude, from its supervention in any particular case, that the operation should never be performed, is not less unwarrantable than to infer, that, because *phlebitis*, *peritonitis*, and *phrenitis* sometimes follow the operations of bleeding, lithotomy, and trepanning the *cranium*, these operations should be discontinued.

—Edin. Med. and Surg. Journ.

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Hospital Reports.

NORTH LONDON HOSPITAL.

Lithotomy.

HENRY SHORE, aged 27, was admitted, April 30, under the care of Mr. Liston. He has been suffering from stone in the bladder for the last five or six years. During August last, the symptoms having become

much aggravated, he was induced to apply for relief to one of the London Hospitals, where lithotripsy was performed without success. The operation was attended with great suffering, without producing any sort of benefit. Since that period the symptoms have been unabated in severity; and he was willing to submit to any operation to remove them.

On the 2nd of May Mr. Liston proceeded to operate. The curved staff having been introduced, and the presence of the stone detected, the patient was secured in the usual manner. The bladder was reached, and the prostate divided, as far as necessary, by the second incision; the forceps was then introduced, and the stone removed with ease, having been first turned by the fore-finger of the left hand to the position most favourable for its extraction. A gum elastic tube was then introduced through the wound into the bladder, and retained by strips of oiled silk, tied to a bandage applied round the loins. The patient did not evince the slightest feeling of pain, except during the introduction of the staff. There was scarcely any blood lost in the operation; but a few ounces afterwards: the urine came through the tube quite clear, about three hours after the operation. The tube was removed the next morning. The patient is doing well, says, "he is happy, being free from pain." There seems to be no constitutional disturbance. He says he did not suffer any pain in comparison with what he endured when lithotripsy was performed. The stone was two inches and a half long, and one and a half broad, of the uric acid species, and exceedingly hard; it bore marks of the lithotrite, and on the depressions made by that instrument, was a deposit of the phosphate of lime. The stone was removed in forty-five seconds, from the first touch of the knife. The theatre was crowded with pupils and practitioners.

Mr. Liston was assisted by Mr. Quain, Mr. Duncan, and Mr. Rowland.

Seasons for Conception.

It is a common belief that the spring is the period in which conception most readily takes place. This idea, grounded doubtlessly, as regards man, on some roughly-sketched analogy between him and the lower animals, receives confirmation, however, from careful statistical investigations. Villermé, Quételet, and others, have by these means found that in the order of comparative frequency of conceptions, the months of the year stand thus: May, June, April, July, February, March, December, January, August, November, September, October. Hence the quarter including April, May, and June is most rife in conceptions. In these months also, according to the registers of crime, the greatest number of rapes and attempts at violation are made.

NEW REGULATIONS OF THE APOTHECARIES' COMPANY.

THE following new regulations have been just issued by the Apothecaries, a copy of which reached us too late for insertion in our last:—

Every candidate for a certificate to practise as an apothecary, will be required to produce testimonials—

* Of having served an apprenticeship of not less than five years to an apothecary;

† Of having attained the full age of twenty-one years;

‡ And of good moral conduct.

Students whose attendance on lectures shall commence on or after the 1st of October, 1835, will also be required to produce proof of having attended, during three Winter and two Summer sessions, lectures in the following order, and medical practice from the commencement of the second, to the termination of the third Winter Session.

The Winter medical session is to be understood as commencing on the 1st of October, and terminating in the middle of April, with a recess of fourteen days at Christmas: the Summer session as commencing on the 1st of May, and ending on the 31st of July.

First Winter Session.

Chemistry.

Anatomy and physiology.

Anatomical demonstrations.

Materia medica and therapeutics.

First Summer Session.

Botany; and such other branches of study as may improve the student's general education.

Second Winter Session.

Anatomy and physiology.

Anatomical demonstrations.

Dissections.

Principles and practice of medicine.

Medical practice of an hospital.

* No gentleman practising as an apothecary in England or Wales can give his apprentice a legal title to examination, unless he is himself legally qualified to practise as an apothecary, either by having been in practice prior to or on the 1st of August, 1815, or by having received a certificate of his qualification from the Court of Examiners. An apprenticeship for not less than five years to surgeons practising as apothecaries in Scotland and Ireland, gives to the apprentice a title to be admitted to examination.

† As evidence of age, a copy of the baptismal register will be required in every case where it can possibly be procured.

‡ A testimonial of moral character from the gentleman to whom the candidate has been an apprentice, will always be more satisfactory than from any other person.

Second Summer Session.

Botany, if not attended during the first Summer session.

Midwifery and diseases of women and children.

Forensic medicine.

Medical practice of an hospital.

Third Winter Session.

Dissections.

Principles and practice of medicine.

Midwifery, with attendance on cases.

Medical practice of an hospital or dispensary.

The student is required to attend the medical practice of a recognised hospital, from the commencement of the second Winter to the termination of the second Summer session, and from that time to the end of the third Winter session, at an hospital, or recognised dispensary.

The sessional course of instruction in each respective subject of study, is to consist of not less than the following number of lectures, viz.:—

One hundred on chemistry.

One hundred on materia medica and therapeutics.

One hundred on the principles and practice of medicine.

Sixty on midwifery, and the diseases of women and children.

Fifty on forensic medicine.

Fifty on botany.

The number of lectures on anatomy and physiology, and of anatomical demonstrations, must be in conformity with the regulations of the Royal College of Surgeons of London, on these subjects.

The lectures required in each course respectively, must be given on separate days.

Students, when they present themselves for examination, must bring testimonials of having received instruction in practical chemistry during their attendance upon the lectures on chemistry, materia medica, or forensic medicine; and also of having attended a full course of clinical lectures, and such instruction in morbid anatomy as may be afforded them during their attendance at an hospital.

Every student will be required to produce proof of having dissected the whole of the body once at least.

That the lecturer on the principles and practice of medicine must be, if he lectures in London, or within seven miles thereof, a Fellow, candidate, or licentiate of the Royal College of Physicians of London; and if he lectures beyond seven miles from London, and should not be thus qualified, he must be a graduated Doctor of Medicine of a British university of four years' standing (unless previously to his graduation he had been for four years a licentiate of this court).

That the lecturer on *materia medica* and therapeutics must be a fellow, candidate, or licentiate of the Royal College of Physicians of London; a graduated doctor of medicine of a British university of four years' standing (unless previously to his graduation he had been for the same length of time a licentiate of this court), or he must be a licentiate of this court of four years' standing.

That the lecturer on anatomy and physiology must either be recognised by the Royal College of Surgeons of London, or must be a member of that college of four years' standing.

That the demonstrator of anatomy must either be recognised by the Royal College of Surgeons of London, or must be a member of that college.

The only other important changes in this batch of regulations are, that every hospital must contain 100 beds; be situated in a city or town in which there is a school of medicine, and be attended, if in London, by two physicians of the London College; and if in the country by such, or graduated doctors of medicine of a British university; and also by a legally qualified Apothecary. The same rule applies to dispensaries. Lastly, the examination in Latin may be obtained at the commencement of the first winter session by those who commence next October; or by those already registered, by giving notice to the beadle.

The examination on the practice of medicine embraces diseases of pregnancy, the puerperal state, and also those of children.—Surgery and obstetrics are excluded.

Students who commenced during former sessions, must comply with the regulations existing at the time. Students may attend lectures during their apprenticeships, and may apply for examination at the age of twenty-one years.

The winter session to commence on the 1st of October, and terminate in the middle of April, with a recess of fourteen days at Christmas. The summer to commence May the 1st, and terminate July 31st.

DEATH OF DR. HOOPER.

THIS celebrated physician expired at his lodgings in Bentinck-street, Manchester-square, on Wednesday last, the 6th inst., after a short illness, which he bore with Christian patience. He took up his residence in town for the purpose of being near his medical attendants. He was ill about three weeks, and his disease was urinary abscess. Few physicians acquired such eminence as Dr. Hooper. His various works were most favourably received and translated into the foreign languages. His *Anatomists'*, *Physicians'*, and *Surgeons' Vademecum*, and *Medical Dictionary*, passed through several editions, and had perhaps the greatest circulation of any of our medical works.

We were informed, while editing the last

and present edition of his *Physicians' Vademecum* of 1833, that 20,000 copies of the work had been sold. His works have conferred essential benefits on science and humanity.

Dr. Hooper had retired for some years past from practice, and resided at Stanmore Cottage. Few were more respected for amenity of manners and sincerity of friendship; and few will be more sincerely regretted by a large circle of private friends and professional acquaintances. His age was fifty-six years.

The editor of this journal has to deplore the loss of a very valuable friend in Dr. Hooper, a loss the more deeply to be felt, as he was honoured with that eminent physician's valuable acquaintance without the slightest solicitation. Dr. Ryan had been requested by the proprietors to revise the last edition of Dr. Hooper's *Physicians' Vademecum*, a duty he discharged to the best of his ability; and it was most gratifying to his feelings to receive the kind acknowledgment from Dr. Hooper of his approbation and friendship. The last act of his professional life was to recommend Dr. Ryan to be intrusted with the re-editing of his *Medical Dictionary*, another unsolicited favour; the last, alas! he can ever receive from so great an ornament of his profession.

LITERARY INTELLIGENCE.

IN a few days will be published, *A New Practical Formulary, or Conspectus of Prescriptions of the Civil and Military Hospitals of France, England, Germany, Italy, America, &c. &c.*, including the *Formularies* of MM. Magendie, Lugol, Dupuytren, Alibert, &c., and of the most eminent Physicians and Surgeons, in Medicine, Surgery, and Obstetrics; with an Account of the Doses of all new and ordinary Medicines, Rules for Prescribing, &c. Translated from the Second French Edition of MM. Milne Edwards, and Vavasseur, and considerably augmented by M. Ryan, M. D., &c.

CORRESPONDENTS.

J. F. C.—The article will appear in our next.

The paper on Purgatives is too late for this number.

One of the Class—We cannot answer the question, though we are almost certain we might in the affirmative.

A Constant Reader—The trickery is unworthy of the member of the College or Hall, though it is unfortunately too common. Were we to insert these handbills, &c., we should be expected to place many others before our readers.

Londinensis—The candour and readiness to comply with our request, convince us of the authenticity of this statement, and we therefore insert it.

THE

London Medical and Surgical Journal.

No. 172.

SATURDAY, MAY 16, 1835.

VOL. VII.

A LECTURE

Delivered in Chelsea Garden, on Monday, 27th April, 1835;

BEING

INTRODUCTORY TO THE COURSE OF BOTANICAL DEMONSTRATIONS.

BY GILBERT T. BURNETT,

PROFESSOR OF BOTANY, IN KING'S COLLEGE, LONDON; TO THE MEDICO-BOTANICAL
SOCIETY; AND TO THE SOCIETY OF APOTHECARIES.

(Concluded.)

THE physical conditions under which plants exist and are found in relation to other organic beings, or in the world at large, such as their geographical and local distribution, the geological position of the remains of the ancient flora of the globe, and various other collateral inquiries, form that branch of the science called vegetable statistics.

These are all novel fields of investigation, and our knowledge of them, at present, in a somewhat rudimentary state: yet enough is already known to convince us of their commanding interest and importance. The habits of mankind, their modes of life, and even their civil condition, is often greatly influenced by the vegetation of the countries they inhabit; and if the energies of the mind may be increased or diminished by the strength and the healthiness of the body, the effects of food must be far from trifling; indeed, it is well known that its influence is great. Thus, certain lines may be drawn through various parts of the globe, separating regions in which either pasturage and corn, or the vine and olive, or other vegetables chiefly flourish—and these lines will be found to separate the beer-drinking from the wine-drinking nations; and the countries in which the people consume, on the one hand, vegetable oil, as in Italy, Sicily, and Greece, from those, on the other, in which animal oil or butter supplies its place. Similar demarcations may be drawn between the fish-eating, the meat-eating, and the rice-eating nations; and the civil condition and mental capacities of the Esquimaux, the inhabitants of temperate and southern Europe, and the effeminate nations of the East, need merely to be mentioned to shew their contrast.

The topographical distribution of plants is no less interesting than the study of their geographical range. Thus, in the first place, they often indicate the healthiness or insalubrity of the districts in which they are found; even the nature of the soil may be judged of by the indigenous vegetation, and the conditions of the atmosphere; and the variations of climate may often be calculated more correctly by the plants found growing without protection, than by any other mode of observation. The preference exhibited by certain plants for certain soils is a most wise provision of nature. Thus, species with long tap roots, such as thistles, docks, &c., prefer clayey soils, which they penetrate, underdrain, and render fertile. Plants with long, creeping and fibrous roots, such as the mat-grasses, will grow only in sand; and by the interlacing of their fibres it is that the undulating sand-hills become bound as it were in a living net, and mould prevented from being wholly washed from the sides of mountains, and the banks thrown up from the sea hindered from deluging the plains. A sand-flood is indeed a fearful visitation—Egypt is a terrible example of its destructive power—and even in our own country there are many lamentable instances of the ruin it occasions; the shores of Suffolk, near Downham, where the sand-flood has travelled inland upwards of five miles within a century, and those of the eastern side of Scotland, may be cited as examples; and the devastation would have been much greater on every point, had not its ruthless course been restrained by the mat-grasses and other adjuvant vegetables. To select one instance from many, of the protective power of these plants, we may refer to the town of Hull. All persons acquainted with its situation, and

cognizant of the force of the tides in the German Ocean, are agreed, that were it not for Spurn-point, which protects the town from the full and direct influence of the devastating waves, that the very site on which Hull stands would long since have been washed away, and the land in its vicinity have been a shoal beneath the sea. Now, Spurn-point is a sand-bank, at first fixed, and still retained, by the interweaving roots of mat-grass, of which I have had specimens brought to me of 20 and 30 feet long, and many have been at various times dug out of much greater length.

The discovery of the symbols or semblances of plants in the various strata of the globe, such as in lime-stone, sand, chalk, and especially in coal, where they are most abundant, has opened another new field of investigation to the botanist, and forms that branch of our science called fossil, or rather geological botany. On the first discovery of these fossils, much difference of opinion prevailed as to their nature and origin, some persons believing them to be petrified vegetables, or plants turned into stone; while others considered that they never had been plants at all, and that their vegetable similitude, although great, was illusive. Chateaubriand, perhaps led away by the vain speculations of some of his countrymen, even went so far as to suggest that they were evidences of the abortive attempts of nature to produce plants, and that, before true and perfect vegetables were formed, many models were spoiled and cast away, or rather that many attempts failed before the desired object was achieved. This opinion is manifestly absurd; and the former one, although not quite correct, is a much nearer approximation to the truth; for modern investigators have proved these fossils to be, without doubt, either the remains of vegetables which once existed on this earth, or the impressions of plants, the substance of which has decayed and been removed, and the vacuity filled by subsequent depositions of earthy or stony matter.

I cannot venture now to do more than hint at the riches of this mine of investigation, which, though but lately opened, has been diligently worked; and the facts thus unearthed, although often mysterious, and frequently, no doubt, misunderstood, yet have already revealed many circumstances respecting the ancient history of the world, and indicate discoveries to be made, far more extensive and important. By these means there have been already ascertained the general characters of the several floras existing at different and distant epochs; also the probable condition of the atmosphere in various eras; the changes which have occurred in the climate of several parts of the globe, as well as the mutations to which the countries themselves have been subject—many large tracts of land having undoubtedly been the beds of former seas, and the summits of the everlasting hills shewn to have been once in the bosom of the deep.

Although other branches of our science are more pleasing, there is none that to me appears to possess so grand, so sublime a character as this. It opens a road by which the mind may safely travel through the ages of past time; it places within our reach the memorials of epochs long since forgotten, and these fossils, thus carefully preserved and laid up by nature, as, to use a weak similitude, the builders of our palaces and temples place coins in the foundation stones, become irrefragable evidence of transactions unrecorded, and which would otherwise have for ever been unknown; and furthermore, while thus assisting to complete the natural history of the world, it is constantly affording collateral proofs of the correctness of the sacred history of creation.

If, as I have stated, the only sure and efficient distinctive characters of plants can be derived from a knowledge of their structure, how vague must have been those schemes of arrangement which were attempted before any such knowledge was obtained; and against what stupendous difficulties and disadvantages did those systematic writers labour, who engaged in this work before organography, or indeed any branch of vegetable physics, was cultivated as a science. It is strange that they achieved what they did—not surprising that they did no more; their numerous approximations to the truth are more strange than the errors into which they were betrayed. At the present day we stand on vantage ground; but we should recollect that modern discoveries are often the discoveries as much of the age as of the individual; for, had not the materials been furnished by our predecessors, we should have been unable both to have wrought in the quarry and to have raised the structure.

We must here cut short our illustrations of the physical conditions of the vegetable kingdom, the study of which will furnish the *principles of botany*, and constitute that branch of our science called Vegetable Physics.

The third great department of botany includes a consideration of the language and other means by which plants may be represented or described; the systems or methods by which they may, for various purposes, be most conveniently arranged—whether for the intent of shewing their natural affinities, to distinguish them from each other, and find them with readiness, or for the uses to which they are applicable; and, thirdly, of the historical details—whether natural, experimental, or traditional, of our science. This department, once considered as the chief portion, and, by many, the whole of botany, although it is in truth but one of three great branches, is that to which the older botanists almost entirely turned their attention; indeed, so exclusively, for a long period, were system and language studied, that the other topics I have alluded to, such as the uses of plants, their structure,

functions, chemical constitution, geographical and geological distribution, &c., &c., were either altogether neglected, or only considered as collateral sciences; and it has not been without difficulty that we have been enabled to reclaim them from the grasp of the comparative anatomist and physiologist, the geographer, the geologist, and the chemist.

This, once the most prominent branch, and that chiefly studied, has, since the admission of the others, been perhaps rather too much neglected: it certainly possesses less commanding interest than the study of the uses of plants, and a less absorbing one than researches into their physical conditions. Still, notwithstanding the outcries of the ignorant against the hard words of botany, and the lamentations of the idle, at the changes which the onward progress of science render necessary in our systematic arrangements, this department will be found not to let those go away unrewarded or discontented, who enter on its study with the true spirit of philosophic devotion.

With regard to the various systems of botanical arrangement, there are two kinds or classes which deserve our especial attention; first, those methods which endeavour to associate plants according to the most obvious natural affinities; and secondly, those which merely furnish an index by which plants may be discovered and distinguished from each other, and for this purpose are designedly artificial in their construction. Those plans which distribute plants according to their properties and uses we shall pass over in silence—they are of much use in pharmacology, dietetics, agriculture, &c., but are serviceable only for special purposes. Of the artificial systems, the Linnæan is, by one consent—or at least with scarcely a dissentient voice—pronounced to be the best; but then it is useful only as an index, and those persons who would confine their studies to this system only, will find themselves grievously crippled in their progress.

As to the various modifications of the natural system which have been proposed, there is no such common agreement—almost every botanist of note having devised a scheme of his own; yet, although these differ in some points, they all more or less agree in many most important, nay, in most of the more important particulars. In the first place, there is little difference as to the acknowledgment of species and genera, and no very important schisms as to the groups of genera called ultimate orders, tribes, families, or types; and these in truth are the only groups in which it is essential that there should be any general accordance. The collection of these families or types into larger and larger groups, is expedient for facilitating an acquisition of their characters, but is not essential for the study of the groups themselves, which some authorities, indeed, prefer to consider as isolated and independent orders, or bind them together by a very loose and slender cord.

The agreement in the primary subdivisions of the vegetable kingdom is, however, known to be as general as in the ultimate ones, and this forms a strong argument in favour of its truth. I need scarcely add, that I refer to the distribution of plants into flowerless or acotyledonous, flowering and monocotyledonous, and flowering and dicotyledonous—which terms, adopted by Jussieu, are equivalent, or nearly so, to the cellular, endogenous, or inside growers, and the exogenous, or outside growers, of De Candolle. This three-fold distribution of the vegetable kingdom having been adopted by Jussieu, in his justly celebrated system, he has often been carelessly referred to as its author; but, although he did much to propagate the doctrine, it claims a much earlier date. Thus, Linnæus gives a table of his primary and secondary subdivisions of the vegetable kingdom, in which the same triadic form prevails, and even the same terms are used. It was, however, with Ray, among the moderns, that this triple distribution originated, and whose tabular conspectus differs only in a few trifling points from those of Linnæus and Jussieu. He primarily distinguishes plants into flowerless and flowering; which groups are equivalent to the acotyledonous and cotyledonous sections of Linnæus and Jussieu, and the cellular and vascular ones of De Candolle, and other modern writers. And he then immediately subdivides the flowering tribes into mono- and di-cotyledons, thus not only anticipating both Linnæus and Jussieu in the scheme of distribution, but also in the very names, which probably they both adopted from him, and never dreamt of claiming for them any originality. Previous to the time of Ray, various attempts had been made to associate plants in natural groups, as may be seen on referring to the Herbals of Parkinson, Dodoens, and others, especially to the works of Lobel and Pena; and many of the natural orders of these old writers were introduced into their systems by Ray, Linnæus, and Jussieu, and maintain their position even to the present day.

But this three-fold distribution may claim a much earlier origin, a much higher antiquity, for it is the distribution which appears to have prevailed in the earliest ages of the world, as traces of it may be found in the very beginning of the oldest records we possess, viz. in the book of Genesis. And, as I have elsewhere observed, it is a most remarkable fact, that in a work written in so early an age, almost before the birth of botany as a science, a work, be it remembered, not on natural history, nor written by a naturalist, but in which, if any references to plants occur, the mention is incidental, yet, that in such a work, and written at such a time, the classification of plants now generally adopted, and only of late universally received, should have been not obscurely hinted, but clearly and explicitly described.

It is curious that a system, which it has taken centuries to mature, and which successive

botanists have laboured age after age to advance to perfection, should be identical with that adopted by Moses, and from which for so many thousand years naturalists had wandered more and more, and to which their return was wholly unpremeditated, as the identity was not recognized until after the return was made.

The vegetable kingdom, it is well known, is now divided by common consent into three great regions; their names and synonymes, *A-*, *Mono-*, and *Di-cotyledons*, or *Exogenæ*, *Endogenæ*, and *Cellulares*, &c. &c., as well as their distinctive characters, are so familiar to most persons, that, even to repeat them sounds truistical. These primary divisions were called by Linnæus, from their port and habit, *Plantæ*, *Fruges*, and *Cryptogama*, as well as di-, mono-, and a-cotyledons, and have by others been termed, with more especial reference to their fruit or reproductive organs, *SEED-bearing*, *GRAIN-bearing*, and *SPORE-bearing* or seedless plants, which are merely English versions of Agardh's *SEMINIFERÆ*, *GRANIFERÆ*, &c. The lower series, including all the cryptogamic vegetables, even the ferns, have been considered seedless, because they are reproduced either by portions separated from their general mass, or by small grumous masses called spores, which have more resemblance to buds than seeds, which germinate from no fixed points, and which are destitute of an embryo, the essential organ of a grain or seed. Hence these, which include all the flowerless tribes, are called *Exembryonæ*, i. e. seedless plants, by Richard.

The second series, including the grasses, sedges, rushes, lilies, palms, &c. although furnished with flowers, and bearing seeds having perfect embryos, have this embryo but one-lobed, i. e. mono-cotyledonous, and such unilobate seeds are most frequently, as in all the grasses, rushes, and many other plants, invested only with a tight obscure pericarp, so that they have been considered naked, and called *grains*, to distinguish them from other seeds which have a loose and fleshy, and often eatable pericarp, such as the apple, the orange, and the plum, which, for the sake of distinction, have been termed fruits. Now these *seedless* or *spore-bearing*, *grain* or simple *seed-bearing*, and these *seed-vesselled* or *fruit-bearing* plants, which have just been shewn to be equivalent to the acotyledons, monocotyledons, and dicotyledons of Linnæus, Jussieu, and all modern botanists, are at the same time most peculiarly coincident with the three primary divisions hinted at by Moses. In the Book of Genesis we read that it was in the third epoch or day that vegetables were created. In our vulgate the account runs thus: "God said, let the earth bring forth *grass* (*DESHE*), and the *herb* (*ÆSHEB*) yielding *seed*, and the *fruit-tree* (*ETZ*) yielding *fruit* after his kind, whose *seed* is in itself, upon the earth, and it was so." "And the earth brought forth *grass* (*DESHE*), and the *herb* (*ÆSHEB*) yielding *seed* after his kind; and the *tree* (*ETZ*) yielding *fruit*, whose *seed* was in itself, after his kind." The words *etz* or *otz*, and *æseb* or *æsheb*, have been very well rendered by "*herb yielding seed*," and "*tree yielding fruit whose seed is in itself*;" but the translation of *deshe* or *deshe* is far less happy; in the text it is rendered "*grass*," in the margin "*tender grass*," and this marginal note renders it probable that some difficulty occurred, or that some doubt was entertained of the strict propriety of the version. "In the terms *tree* and *herb* we find, as the anonymous writer already referred to observes, a recognition of a remarkable natural distinction among the vegetable tribes; and this very circumstance would lead us to infer that the first term (which has obviously presented a difficulty to our translators, since they have given two interpretations of it), is intended to express some class or tribe of the vegetable kingdom, as naturally distinguished from herbs and trees as they are from one another. The term in question (*deshe*) is a noun from a verb, of which, from Joel ii. 22, we learn the meaning is *to spring*, *to shoot*, *to vegetate*, "Be not afraid, ye beasts of the field, for the pastures of the wilderness *do spring*" (*dasheu*). In the 11th verse under consideration, we find both the verb and the noun, for the words translated. "*Let the earth bring forth*," are *tadeshe haaretz*, which, in accordance with the obvious sense in Joel, would be better rendered, "*Let the earth shoot out*." From this meaning of the verb, then, the noun would signify the *springing* or *shooting plant*, and, as used here, in contradistinction to both herbs and trees bearing seeds, it is surely not recommending any forced interpretation to suggest, that it is meant to express that class of vegetables which are by botanists recognised as being naturally distinguished by the obscurity of their means of reproduction," plants which are called seedless both by the learned and the simple, and which the earth does literally *shoot out*, whence indeed the idea of their equivocal or fortuitous generation sprang.

This version is corroborated by the fact that *deshe* is not the Hebrew word for *grass*. The term for *grass*, the common food for cattle, is *chatzir*, which the lexicographers have shewn to be derived from its tubular structure. Thus, in Job xl. 15, we read, "he eateth *grass* (*chatzir*) as an ox;" and, Psalm civ. 14, "he causeth *grass* to grow for the cattle." In several passages, besides this of Genesis, we find *deshe* contradistinguished from both *æseb* and *chatzir*, as in Deut. xxx. 2. "As the small rain upon the *tender herb* (*deshe*), and as the showers upon the *grass* (*æseb*); and, Psalm xxxvii. 2, "They shall soon be cut down as the *grass* (*chatzir*), and wither like the *green herb*" (*deshe*); and, 2 Kings xix. 26, "They were as the *green herb* (*deshe*), as the *grass* (*chatzir*) on the house-tops." These quotations shew the want of uniformity with which the English translators have rendered these terms, and go to support the sense we would assign to it. And, furthermore, they prove that the *deshe* or *tender herb* of the Hebrews was something very different from *grass*, their

chatzir, and naturally contradistinguished from their *aseb* and *etz*, which, comprising all seed-bearing and fruit-bearing plants, the only others which their *deshe* could signify are the seedless ones."

Much more, gentlemen, might be added in further illustration of the interesting discoveries with which even this, the least promising subdivision of our science, abounds; but time warns me to conclude, and I will not neglect the admonition. Yet, in reflecting for a moment on the topics we have so cursorily discussed, I cannot but be convinced that so few are the facts and so meagre the details which I have been enabled to include in this inaugural address, that I am almost fearful of the effects of so rude a sketch. From such scanty, almost isolated memoranda, how imperfect must be the ideas conveyed of the vastness, the perfection, and the importance of that science which they were designed to illustrate and explain. But, even short as they have been, their length will prevent me now collecting their several radii into a common focus, and giving you a general view of the distribution of this department of botany. That conspectus I must reserve for the following lecture, and will only, in conclusion, beg you not to condemn the science as unworthy your attention, merely because its advocate is weak.

Note.—I have just learned that the *œnanthe crocata*, which occasioned the fatal accident at Woolwich, mentioned in the early part of this lecture, was mistaken for celery, and recommended by one of the convicts to his yoke-fellows as an excellent vegetable. I am glad of the opportunity this note affords of correcting an error into which some of my friends have fallen, by supposing I intended to insinuate that the convicts are improperly restricted in their diet, and that many were forced by hunger to eat this poisonous plant. The lecture having been given extemporaneously, I cannot recal to mind the exact words made use of; but it was the simple, yet important fact of the mistake having been made, and its melancholy results, that I desired to quote as illustrations of my argument.—G. T. B.

LECTURES
ON THE
PHYSICAL EDUCATION AND DIS-
EASES OF INFANTS,
FROM BIRTH TO PUBERTY.

BY DR. RYAN,
*Delivered at the Medical School, Westminster
Dispensary, Gerrard Street, Soho;
Session 1834-35.*

LECTURE XXXV.

*Nævus Maternus—Congenitæ Notæ—Envies
Maller-Mahl—Mothers' Marks—Spilus
or Mole—Ecchymoses—Tumefaction of the
Scalp—Abscesses in different Parts—Tu-
mours—Contusions on different Parts—
Elongation of the Head of the New-born
Infant.*

GENTLEMEN—I have still to describe some other congenital diseases of the skin, to which I wish to direct your attention.

Nævus Maternus, Congenitæ Notæ, Envies Maller-mahl, Spilus, Mothers' Marks.—Marks on the skin form a transition between vices of conformation and inflammatory diseases of the integuments. The various congenital marks, moles, excrescences, and discolorations, have been indiscriminately classed together under the name of *nævi*. They may be divided, however, into two classes—congenital alterations of the pigment, and vascular hypertrophy, or productions on the skin. The first class is caused by disease in the rete mucosum, in which the vascular network deposits the materials of the pigment; while the second class depends on the vascular net-work itself. This distinction was established by the researches of Callisen, Breschet, Bateman, Abernethy, John Bell, Wardrop, Martinet, and Rayer.

The pigmentary *nævi* cannot appear on the surface of the skin of the embryo before the third month of its growth, as the pigment does not exist before this period, for it is about the half term of intra-uterine gestation that the skin receives the greatest abundance of blood, and acquires its organization. M. Billard observed twenty embryos under the above age, and not one presented a congenital mark; but he modestly states, that a greater number of observations are wanted to confirm or overthrow his opinion.

M. Breschet ascribes *nævi* to an alteration of the skin, or to an abnormal development of the sanguineous capillaries, arterial or venous vessels, or a dilatation, relaxation, varicose or aneurismal state of these vessels. (*Dict. de Med., Art. Nævus.*) He also considers that the mucous body and pigment are affected in certain cases.

The different tissues which compose the integuments are so intimately connected, that disease in one may readily involve another. Thus the bulbs and hair develop with the cutaneous vascular net-work; hence brown or reddish spots are covered with coloured hair on different parts of the body. It is also possible that the cutaneous vascular net-work (capillaries) and the capillary body of the skin, may undergo alterations independently of the pilary or capillary system; and hence we often see brownish or violaceous spots with or without hair.

In fine, a simple alteration of the colour of the pigment, without apparent tumefaction, may take place, and then we observe yellow, red, brown, violet, dark, and other coloured spots on the face, trunk, and limbs. These last alone merit, according to Billard, the name of pigmentary spots; as those

which are salliant or projecting and covered with hairs, indicate an alteration in some other of the tissues which constitute the skin.

The congenital affections of the pigment, which the ancients termed *spili* or moles, present an infinity of varieties of form, magnitude, colour, and structure, and are observed in different instances on almost every part of the surface of the body. They generally appear on the face, which is explained by the development and activity of the sanguineous capillary system of that part. Some are superficial, or stain-like spots, and appear to consist of a partial thickening of the rete mucosum, sometimes of a yellow, yellowish brown, rose, red, livid, blue, or black colour. They generally remain stationary after birth, do not shew any morbid tendency, and should not be interfered with, as the effects of excision or caustics often leave more disagreeable appearances than the original marks. These, like many other congenital anomalies, are at first true diseases, but gradually become the natural state of the parts on which they are situated. Operations are only necessary in the vascular species, which I shall now describe.

Vascular Nævi.—These present a reddish colour, and an elevation more or less considerable. They consist of enlarged and contorted or varicose veins, which J. L. Petit named sanguineous fungi, and small aneurisms. They differ, however, from aneurism by anastomosis, in this—that they can exist without the communication between an artery and a vein, and do not offer to the touch those pulsations and murmurs peculiar to these aneurisms. In either case these elevated marks of the skin, caused by aneurismal dilatation of the small subcutaneous vessels, may, after birth, enlarge, ulcerate, and give rise to a fatal hæmorrhage, so that we must, as the age and health of the infant permit, arrest their progress and completely remove them.

Vascular nævi are sometimes spread more or less extensively over the surface; they occasionally cover the whole of one extremity, or one-half of the trunk of the body, and they are elevated into prominences of various forms and sizes. They are generally of a purplish red colour, varying in intensity according as the collection of blood-vessels is near the surface. There are two species of them:—1. Vascular cutaneous nævi, or nævi flammei, which are characterised by one or several violet-coloured patches, which assume a darker colour under the influence of all causes that accelerate the motion of the blood, as violent exercise, remaining long in a warm apartment, the heat of the bed, the use of strong warm drinks, stimulating aliment, affections of the mind, and the erethism of menstruation. Some are ovoid, pediculated, and formed by a true erectile tissue. These are red and granulated, and have been compared to cherries, raspberries, currants,

grapes, &c.; others are flat upon a broad base; some are vivid at and after birth, but gradually fade and disappear; some remain stationary through life, while others grow and extend soon after birth, or from accidental causes, and acquire a considerable size, when they readily burst, and produce an impetuous and profuse hæmorrhage, which, if not destructive to life, is highly injurious to health*. Lastly, they sometimes enlarge to a great size, then remain stationary, or gradually diminish and disappear. At other times they present the characters of erectile tumours, and sometimes terminate in cancer.

These vascular enlargements sometimes exist in deep-seated parts. They may occupy the whole surface of the cheek, according to Abernethy, and any external part of the body, according to John Bell.

When accidentally inflamed or ulcerated, they cicatrize with difficulty.

The mode of formation of these connate deformities is equally inexplicable as other anomalous and monstrous productions of nature; "but it would," says M. Martinet, "be insulting to the understanding of the reader, to waste one word in refutation of the vulgar hypothesis, which ascribes them to the mental emotions of the mother—an hypothesis totally irreconcilable with the established principles of physiology, and with the demonstrable nature of the connexion between the foetus and the parent, as well as with all sober observation." (*Manual of Pathology*). The vulgar opinion here denounced is, however, still entertained by a few medical practitioners, and by a vast number of women; and this has led me to expose its absurdity in my work on Obstetrics; because the fears of a pregnant woman will indirectly injure herself as well as the infant in her womb; and as these are groundless, so far as marks and deformities are concerned, I hoped to do good by dissipating them.

It has been already stated, that whatever expedites the circulation of the blood, as corporeal or mental exertion, warmth, warm drinks, &c., increase the redness of nævi. It is for this reason that they are redder in spring and summer, not from sympathy with ripening fruits, but from the more copious afflux or determination of blood to the skin, in consequence of the increase of atmospheric temperature.

Subcutaneous vascular nævi, described by Petit, Latta, Lassus, and Mr. Wardrop (*Med. Chir. Trans.*, vol. ix. p. 109), are more frequently developed on the face than any other region. Their size is diminished by pressure, and increased by crying, &c.; and they have no distinct pulsation like aneurism by anastomosis. They sometimes enlarge to

* This discharge has become vicarious in women, and returned in place of the regular menstrual evacuation. (Boyer; J. Bell. *Op. Cit.*)

a great size, and at other times remain stationary. They may inflame, ulcerate, and burst, and then cause profuse hæmorrhage. On dissection they are found to consist of a number of small cells, through which are distributed a large number of arteries and veins. When small, Mr. Wardrop caused inflammation and ulceration with success; but others prefer excision. When large, Mr. Wardrop advises to tie the artery which supplies the tumour, and then use the knife or caustic. The carotid artery has been tied for nævus of the cheek, and when the disease exists on a finger, or any part of a limb, some have resorted to amputation.

When the cutaneous vascular nævi are superficial without elevation, which would render them liable to accidental rupture, and without any tendency to enlarge or spread, there is no valid reason for attempting to remove them. If they enlarge, on the contrary, then remedial means are necessary; Mr. Abernethy considered there was a degree of inflammatory action in the vessels surrounding these tumours, and he therefore thought that a constant sedative application on these vessels, by means of cold, would be beneficial. He used refrigerants and compression. He applied folded linen, and ordered it to be kept constantly wet. This plan, though simple, succeeded in several instances in repressing these growths, and caused them to shrink and disappear. (*Surgical Works*, vol. 2). Professor Boyer ordered compression with the finger on a nævus of the upper lip for several hours every day, which caused it to disappear; and washed the tumour with a weak solution of alum. (*Traité de Malad. Chirurg.*) But Bateman judiciously remarked, that this compression was sometimes made with difficulty, was painful, and often inefficacious. Fabricius, Hildanus, J. L. Petit, and John Bell, recommended the extirpation of the tumour by means of a cutting instrument; and the last has most ably explained the grounds of this precept, by describing the real nature of these excrescences, as well as the sources of failure and danger when they are simply cut into or opened by caustic. Mr. White, of the Westminster Hospital, and Mr. Lawrence, passed a needle with a double ligature under the base of the tumour, tied it on each side, so as completely to destroy the part, by cutting off the supply of blood. (*Med. Chir. Trans.* vol. 13).

Mr. Hodgson proposed to vaccinate the tumour in different parts of its surface, so that a coalescence of the adhesive inflammation consequent to each vesicle might completely obliterate the nævous tissues. I have frequently tried this plan when the nævus was small, with success. The object is to produce an effusion of lymph in their structure, and thus obliterate their vessels. Others recommend various caustics, nitric acid, a combination of lime with soap (Callisen), chloride of

lime (Hanke), &c. when the nævus is small; and many cases have been removed from the use of these remedies. These were suggested by the facts, that accidental ulceration, or sloughing, destroyed a great portion of the tumour, and excited such inflammation as consolidated the rest of it. Great caution is necessary, lest a vessel of any size be opened by the caustic, which might cause fatal hæmorrhage.

As nævi are often stationary until the age of puberty, and as young infants are bad subjects for painful operations, it is considered the safest and best practice to avoid harsh measures, unless the tumour increases in size. Milder means should of course be employed in the first instance.

Diseases of the skin not inflammatory, developed during, or after birth.—These include local and general congestions, petechiæ, and some alterations of colour.

Ecchymosis.—The term ecchymosis is applied to the red, violet, or greenish-coloured mark, produced by a blow or other external injury, and caused by blood effused or infiltrated in organised tissues. This appearance may be observed on any part of the body of a new-born infant, and is the usual result of a difficult labour. It is most commonly observed on those parts which are most subject to pressure, such as the head and neck; and few first-born infants come into the world without more or less ecchymosis of the hairy scalp, and often considerable swelling. This is generally observed when the mother is young, or advanced in life; and when the child is large and the mother under the middle size. I have seen infants born with ecchymosis on almost every part of the body, the result of falls or blows on the abdomen of the mother during the last months of pregnancy. Injuries of this description are said not only to cause ecchymosis, but fractures, and even kill the infant in the womb; but I have never seen fractures result from them. It is important not to confound congenital nævi, or those which are caused by pressure during labour, or by instruments, with those which are produced by some criminal attempt to promote abortion, or to destroy the life of the infant before birth. The medical witness should consult some work on jurisprudence, on contusions, wounds, &c., lest he commit an error which might produce fatal consequences.

The treatment of ecchymosis or blackness, is very simple. Resolution or absorption generally takes place spontaneously. Nevertheless, if there is much swelling of the integuments, it will be advisable to use cold lotions, such as vinegar or spirits and water, Goulard's extract, or vegeto water, as it was formerly called. A tablespoonful of vinegar, or any kind of ardent spirit diluted with half a pint of water, will form an excellent lotion, which if applied constantly by wetting a piece of linen with it, or moistening the latter with it as often as it dries, will generally remove

ecchymosis. But unless in bad cases, any of these applications is unnecessary. In general the swelling and blackness disappear of themselves. In some cases there is considerable swelling of the back or sides of the scalp, accompanied by blackness, and this is called by British writers—

Tumefaction of the Scalp, and by the French *Tumeur du cuir Chevelu*. This tumour is caused by the pressure of the bones, or soft parts of the parent on the head of the infant during parturition, which interrupts the circulation of the blood through a certain portion of the scalp, generally the back part or sides; the blood accumulates in the cellular tissue between the skin and pericranium, and sometimes is effused or extravasated, forming a kind of *tegumentary apoplexy*, and sometimes apoplexy of the brain. This kind of tumour is of rare occurrence, but when it does happen, and proves fatal, blood is found in a fluid state, the surrounding parts are of a violet red, as well as the bones themselves, which have imbibed the fluid. The scalp is red, violet, or blackish externally.

There may, however, be considerable tumefaction of the scalp, without extravasation of blood, but arising from infiltration of this fluid or its serum. The edges of these tumours are so well defined, that a practitioner who saw a case for the first time, might suppose that the bone was wanting or depressed by fracture, or even that the infant had a large tumour attached to its head, or a double head. I was requested about four years ago to visit an infant, who was supposed to have a second head imperfectly developed, but the tumefaction arose from infiltration of blood*. These tumours were designated differently by various authors.

The terms *abscessus capitis neonatorum*, *hæmatoma*, *hæmatoma capitis*, *cephalæmatoma necnatorum*, *ecchymoma capitis*, *tumour cranii sanguineus*, were used by Levret, Smellie, J. P. Franck, Paletta, Nægelé, and others. In this kind of tumour the blood is not simply effused under the skin, but between the pericranium and the bones; and according to numerous observers, the effusion results from a rupture of the venous branches before their opening into the sinuses. According to others, it is caused by a separation of the outer table of the skull. Some practitioners state that this tumour is not caused by a slow or difficult labour, but happens as frequently when the labour is rapid. According to my own experience, I must say that I have never observed this tumour after an easy or natural labour.

The period of the disappearance of ecchymosis and tumefaction of the scalp must vary according to the extent of the disease. I

have known both disappear in three or four days, and other cases continue for two and three weeks. The constant application of the cold lotions above mentioned, when treating of simple ecchymosis, or even cold water, will generally excite the absorbent vessels, and effect the removal of the tumour. Mothers and nurses are fearful that the constant application of cold to the head of a new-born infant will cause bad effects, but this is an error, as no danger whatever is to be apprehended. Nurses generally rub the tumour with some kind of ardent spirit, which is a safe practice, provided the cuticle is unbroken.

When blood is effused on the cranium or in the brain, the disease is often fatal, as dissections have proved. Siebold relates in the thirteenth volume of Richter's *Bibliotheca*, a case in which he effected the resolution of large tumours by applying compresses, wetted with an aromatic decoction mixed with a solution of muriate of ammonia. These were no more than cold lotions.

The disease should be treated on the ordinary principles of surgery; and therefore, if benefit is not derived from cold applications, if the child is sleeping incessantly, or comatose, there is compression of the brain, and a longitudinal incision should be made into the tumour, to evacuate the effused blood, when absorption cannot be otherwise effected.

Capuron and Billard advise this practice, which accords with the standard precepts of surgery; and I should not hesitate to employ it, if all other means, after a fair trial, had failed. Compresses and cold lotions should be applied after the evacuation of the effused blood; and in general the wound heals very kindly. Dr. Burns passes over this disease very lightly, and says that the application of brandy will remove it. Others have written largely upon it, as a disease worthy of great attention; and with these I fully agree, though in general tumours of the scalp disappear very speedily by ordinary remedies. M. Capuron has judiciously observed, that we ought not to confound these tumours with encephalocoele or hernia of the brain; and Dr. Nægelé has remarked, that the latter is generally situated over the posterior fontanelle or occiput. The former is situated on the parietal protuberances or summit of the occiput; but the diagnosis will be easily formed, by reflecting on the appearance of the tumours and the species of labour. It will also be easy to distinguish tumours formed by œdema, or serous infiltration, from the sanguineous kind. The following works on the latter will be perused with advantage. *Paletta, Exercitat. Patholog. Milan, 1820; Car. Zeller, de Cephalæmatomate, seu Sanguineo Cranii Tumore recens natorum*, (Præs. Nægelé) Heideberg, 1822; Ant. Her. Haller, *De Tumore Capitis Sanguineo Neonatorum, Dissert. Dorpat, 1824; G. C. L. Brandau, Ecchymomata Capitis Recens Natorum*, Marbourg, 1824; G. F. Hære, *De Tumore*

* Levret mentions a case in which the practitioner supposed there was depressed fracture of the skull.

Cranii recens Natorum Sanguineo et Externo et Interno, Berlin, 1824; J. D. Strewé, *De Cephalæmatomate seu Sanguineo Cranii Tumore Externo recens Natorum*, Giessen, 1824; Billard, *Traité de Maladies des Enfants*, Paris, 1833.

Different Tumours on the Body.—Sometimes tumours containing either blood, serosity, or pus, are found on the body of the fœtus, and which were not formed by pressure upon it during its passage through the pelvis. At other times they present all the characters of encysted, steatomatous, and lardaceous tumours, &c. They are developed, during intra-uterine life, either on the chest, neck, back, shoulders, or on the head; and for which reason they are called, though erroneously, external hydrocephalus; a remarkable case of which appeared in the *Journal de Sciences et Institutions Médicales*, t. ix. p. 260. M. Chaussier found, in the middle of one of these tumours, situated at the iliac region, a kind of oblong cartilaginous growth, which rose from the crest of the os innominatum. Care should be taken not to open these tumours before proper means have been tried to remove by absorption the fluid which they contain, or before the infant has acquired sufficient strength to resist the inflammation of the walls of these sacs, and the suppuration which follows, when their immediate reunion cannot be effected.

Contusions and Bruises on New-born Infants.—These lesions may be observed after a natural labour; but they are most commonly met with when manual or instrumental operations have been performed. In the first case, the pressure of the bones or soft parts, or genital aperture, or the rude examinations of the obstetrician, or the malposition of the infant, or a deformed or contracted pelvis, may induce them. When the infant presents in an unnatural position, it must be subjected to considerable pressure, as in transverse and facial presentations, and also when the head advances in a wrong position.

But contusions and bruises are most common after operations when the hands or instruments are applied with more or less force over the head, legs, breech, abdomen, chest, neck, or face of the infant, as in version; or in using the forceps, lever, or blunt hook, the two first on the head, and the last on the groins or axillæ, by which wounds and fractures may also be inflicted, unless the practitioner be a scientific and cautious operator.

Contusions and bruises on new-born infants are reddish, brownish, or blackish, either with or without laceration of the cuticle; they inflame and may terminate by resolution, suppuration, or gangrene. Those of the head are in general most dangerous, on account of their contiguity to the brain. Those of the chest and abdomen may also prove dangerous, when the heart, lungs, liver, spleen, or bowels are injured.

Contusions, bruises, ecchymoses, when

slight, generally disappear without any treatment, or by cold applications, as already mentioned. But when the cellular tissue and flesh have been violently contused, it will be necessary to employ antiphlogistic remedies, leeches over the affected parts, warm emollient poultices, to allay the pain and encourage the bleeding; and if suppuration declares itself, it is to be treated on the ordinary principles. If gangrene appears, we must endeavour to limit its progress, and have recourse to tonics and antiseptics, quinine, wine, &c., with lotions of alcohol, dilute nitric acid, &c.; and after the separation of the sloughs, accelerate cicatrization by means of the usual remedies.

Among the external diseases which are congenite, are certain changes in the form of the head, certain solutions of the substance or continuity of bones. These, though not strictly cutaneous affections, are closely allied to them, and may be noticed after contusions and bruises. They are elongations of the head, and dislocations and fractures.

As dislocations and fractures are to be treated on the ordinary principles of surgery, they need not be described in this place.

Elongation of the Head of New-born Infants.

—This deformity is caused in natural labours, when the head presents, when it is disproportionately large, as compared to the outlet of the pelvis, or when there is rigidity, and resistance of the sexual parts, as in very young or aged women, who are in labour for the first time, and especially if there has been a premature escape of the waters or amniotic fluid. In this last case, the labour will be tedious; the head of the infant will be prematurely forced into the pelvis and neck of the womb, long before nature intended; it does not descend like a soft wedge, as in natural parturition, it is moulded to the passage, is contracted from one parietal protuberance to the other, or from side to side, while it is elongated from the occiput to the chin. This form can readily happen, as nature has wisely left the bones of the head imperfectly ossified, so that they may be readily compressed, or lap over each other, which is a great advantage in natural and preternatural or difficult labours. This elongation of the head may take place to a certain extent without injury to the brain; but when it is considerable, the brain is violently compressed, and congested, and apoplexy or convulsions, in consequence of the irritation of the origin of the nerves, or sudden death, may be the consequence. When the elongation is very great, the infant is born dead, the face is black or purple, and the brain is congested, or contains effused blood. Thence it is that the first infants of a majority of women under the age of sixteen, or over thirty-six years, are generally born dead.

It is therefore manifest, that an infant cannot be born without danger, when its head is elongated. Many, however, are born

alive in this condition; and what is still more remarkable, nature will often remove the deformity. Nurses, however, are seldom disposed to allow her, but mould the head after their own fashion, by compressing it between the palms of their hands,¹ and run the risk of injuring the brain, which has recently escaped from fatal mischief. If pressure be made at all, it should be very slight, and directed by a medical practitioner. In these cases, the infant may be born with apoplexy, asphyxia, or apparently dead, or still-born, or extremely weak and feeble. The first is so intimately connected with the last disease, that it deserves notice in this place; the second will be described in the lectures on diseases of the respiratory organs.

Apoplexy of New-born Infants.—When an infant is born apoplectic, it appears as if dead, it is deprived of sense and motion, but its countenance does not present the pallidity of death; the lips are everted, the eyelids red, bluish, and injected, and the eyes almost beyond their sockets, and its face blackish, livid, and swollen. This disease is always produced by compression of the brain, whether by means of the bones of the skull, by narrowness or resistance of the bones of the mother, or by contraction, or thickening of the neck of the womb, vagina, or genital fissure, by the application of the forceps or lever, so that the vessels of the brain are distended by the blood which is accumulated in the head.

This also happens when the umbilical cord or navel-string is twisted round the neck, trunk, body, or limbs of the infant, or when it is compressed by the parts of the mother: under any of these circumstances, the blood cannot return from the head. M. Capuron ably illustrates this point. He remarks, “suppose the infant ceases to respire freely after birth, and after the ligature of the umbilical cord, do we not then observe that it falls into apoplexy, unless we come speedily to its succour? What has this ligature done? precisely the same thing as compression during labour. The one and the other cause apoplexy, by making the blood flow towards the brain; by the first, blood cannot circulate in the lungs of the infant, and by the second, it cannot return to the placenta, which is regarded with reason as the physiological lung of the fœtus.”

On opening the bodies of new-born infants, destroyed by apoplexy, we observe the same appearances as in adults—effusions of blood or serum in the head, under the membranes, or in the ventricles of the brain.

The prevention of apoplexy in infants will be effected by obviating the difficulties above stated, by a scientific practice of obstetrics. The practice in each of the circumstances mentioned, is fully described in all modern works on this branch of medicine, and is foreign to my present subject.

There is one precaution so indispensably

necessary, that I must mention it: and that is, to cut the navel string as soon as the head is born, when it is twisted round the neck, unless it can be loosened, or unless the labour is rapid and natural. If the cord be pressed on for a minute or two, the pulsation of its arteries cease, and the infant will be born apparently dead, but it may be resuscitated. This section is not less necessary after the birth or complete expulsion of the trunk; and as I have known many infants destroyed by neglecting to perform it, I shall allow M. Capuron to comment on this fatal omission. “Every accoucheur, who has then the imprudence to tie the cord, or to wait to cut it until the infant has respired, or uttered some cries, will give a proof of ignorance, and deserves by it to be accused of infanticide. The principle indications here are to reanimate the obstructed circulation, and to excite respiration. To effect this, we bleed the infant by cutting the cord, and by applying leeches behind the ears. We thus disgorge the vessels of the head, and the brain will no longer be compressed. If this evacuation is not sufficient, we plunge the infant into a hot-bath, to which we add some stimulant liquor, as wine, brandy, vinegar, &c. to excite the general sensibility; we rub the whole vertebral column (or spine) with warm cloths, as Legallois has ingeniously proved that the principle of vitality or life which influences the heart resides in the spinal marrow; and finally, to use all means proper to excite the first respiration, as in asphyxia of new-born infants.”

In such cases we may abstract from one to four ounces of blood from the navel string. The face, neck, and spine should be rubbed with brandy or any ardent spirit, as by this means the respiratory nerves of the face and spine will be excited, and inspiration induced. It is upon this principle that sprinkling cold water on the face is good, and that frictions of camphorated liniment with opium, or stimulating liniments applied to the same parts, very speedily relieve and cure hooping cough.”

These directions are excellent, but it is necessary to state, that while the infant is in the hot bath, it ought to be in the sitting posture, and cold should be applied to its head, or the bath will do more harm than good. Unless we use this precaution, we increase the determination of blood to the brain, which we are most anxious to diminish. We may either pour a small stream of cold water from a teapot or small jug on the head, or apply a thin cap or napkin, wetted with cold water, and then continue the affusion. This is not blowing “hot and cold at the same time;” as we equalise the circulation in the body and limbs by the bath, while we diminish it in the head by the constant application of cold. The affusion of cold water may be continued for five or ten minutes, while the infant is in the bath, and is essential in all cases of cerebral congestion and convulsions or other

diseases when the head is affected. It is also used with the best effects in fever, when the head is affected, and it may be repeated three or four times, at the interval of a quarter or half hour, until the face becomes pale, the countenance assumes a more natural appearance, or in other words until the congestion of blood in the brain is diminished.

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A NEW PRACTICAL FORMULARY OF HOSPITALS, OR A

Collection of Formulæ of the Civil and Military Hospitals of France, Germany, Italy, Great Britain and Ireland, &c., containing the Indication of the Doses in which simple Substances, magistral and officinal Preparations of the Codex are administered, the use of New Medicines, and general precepts on the art of prescribing. By M. EDWARDS, M. D., and P. VAVASSEUR, M.D., of the Hospitals of Paris—1834. Translated and augmented by M. RYAN, M. D. &c. &c.

SENNA—(continued from p. 472.)

Subst. incomp. The strong acids, alkaline carbonates, lime water, tartarized antimony, &c.

INTERNALLY. *Powder.* From \mathfrak{Dj} — $3j$. Not much used.

Infusion. $3ij$ — iv to $3viij$ of boiling water, which should be taken at 3 or 4 doses.

The *Infusion of Senna* of the Hot. D. and de la Ch. contain $3ij$ of senna to Oij of water.

Poudre Antiarthritique Purgative. P. Gr. xij — \mathfrak{Dj} , and even more.

Common Purgative Potion. P. $3ij$ — iv .

Lenitive Electuary. P. $3iv$ — $3j$.

Aqueous and Alcoholic Extracts. P. Gr. xij — \mathfrak{Dj} . Not often employed.

Sirop of Senna, or Compound Sirop of Apples. P. $3ss$ — j , and even more.

Compound Powder of Senna. H. of Eng.

Rx. Sennæ foliorum,
Potassæ supertartratis, $\bar{a} \bar{a}$ $3ij$;
Scammoniae, $3ss$;
Zingiberis, $3ij$.

Fiat pulvis.

The dose is \mathfrak{Dj} — $3j$.

Compound Infusion of Senna. H. of Eng.

Rx. Sennæ foliorum, $3iss$;
Zingiberis radiciis, $3j$;
Aquæ ferventis, Oj.

Macera per horam unam et cola.

The dose is $3j$ — ij , as a laxative.

Infusion of Senna with Lemon Juice. H. of Germ.

Rx. Sennæ foliorum, $3vj$;
Aquæ ferventis, Oss.

Decoque per horam, cola et adde,
Succi limonis, $3ss$.

A small cupful to be taken at intervals, until purging is produced.

Decoction of Prunes with Senna. H. of Germ.

Rx. Sennæ foliorum, $3j$;
Pruni domesticæ, \mathfrak{lbss} ;
Aquæ, \mathfrak{lbij} .

Macerate for 12 hours, and strain.

A small cupful at a dose, as a laxative.

Purgative Potion. Hot. D.

Rx. Sennæ foliorum, $3ij$;
Sodæ sulphatis, $3iv$;
Aquæ, $3iv$;
Pulveris jalapæ, gr. xxv .

Fiat potio.

To be taken in two doses.

In another *Purgative Potion* of the same hospital, the jalap is replaced by $3j$ of the syrup of buckthorn.

Compound Senna Mixture. H. of Eng.

Rx. Sennæ foliorum,
Menthæ viridis, $\bar{a} \bar{a}$ $3j$;
Aquæ ferventis, Oij.

Coque, cola et adde,

Magnesiæ sulphatis, $3vj$.

The dose is $3ij$ — iv .

EXTERNALLY. In enema, $3ss$ to Oij of water.

Purgative Enema. H. des Vén.

Rx. Sennæ foliorum, $3iv$;
Decocti lini, Oj.

Infuse and strain.

Purgative Enema. H. de la Ch.

Rx. Sennæ foliorum, $3ss$;
Aquæ, Oj.

Macera, cola et adde,

Sodæ sulphatis, $3ss$;

Vini antimonialis, $3iv$.

Fiat enema.

Employed in Plumbers' colic. It is by this enema that the treatment of this disease is commenced.

Enema of Senna. H. de la Ch.

Rx. Sennæ foliorum, $3ij$;
Aquæ ferventis, Oj.

Macera et cola.

Laxative Enema. Hot. D.

Rx. Fol. sennæ, $3ss$;
Spec. emollient. $3ij$;
Sulphatis sodæ, $3ij$;
Aquæ ferventis, q. s.

Infuse and strain.

RHUBARB.

In small doses an astringent; but in large ones a purgative and a tonic. It is employed with great success in debility of the stomach, anorexia, diarrhoea, and in general in all cases in which a gentle purgative is recommended. It is a medicine very much used in a great variety of cases, too numerous to mention here, and is a very proper one for children.

Subst. incomp. Strong acids, lime water, the sulphates of iron and zinc, tartrate of antimony, the sublimate, the astringent infusions, &c.

INTERNALLY. Powder. As a tonic, gr. vj—xij. As a purgative, ℥j—3 ss, and even more.

Tablettes de Rhubarbe. P. No. iv to xij daily, as a stomachic.

Extract. P. ℥j—3 j.

Sirop. P. 3 ss—j, in a potion.

Sirop de Chicorée Composée. P. 3 i—ij.

Compound Powder of Rhubarb. H. of Eng.

℞. Pulveris rhei,
Potassæ subcarbonatis, ā ā 3 j;
Colombæ, 3 ij.

Dosis gr. x—xx bis vel ter in die.

Powder of Rhubarb and Magnesia. H. of England.

℞. Pulveris rhei, 3 i;
Magnesia, 3 ij.

Dosis gr. x—℥i quotidie.

Powder of Rhubarb and Calomel. H. of Eng.

℞. Pulveris rhei, 3 iv;
Hydrargyri submuriatis,
Pulveris zingiberis, ā ā 3 i.

Fiat pulvis cujus capiat gr. x—℥i pro dose.

[Rhubarb combined with calomel or hyd. c. creta, in alterative doses, is an excellent medicine for children. I have given the formulæ in the article *Mercury*. T.]

Compound Stomachic Pill. Ryan.

℞. Pil. rhei comp., 3 i;
—hydrargyri, ℥ss;
Strychninæ, gr. i.

Fiant pil. xv—i bis vel ter in die.

Boluses of Rhubarb. H. Militaires.

℞. Pulveris rhei, gr. xij;
Sulphatis sodæ, ℥i.

Fiant boli ij.

Bols Fondants. H. of Italy.

℞. Pulveris rhei, 3 i;
Saponis amygdalæ, 3 iss;
Succi sambuci, q. s.

Divide in bolos viij quorum capiat unam secundâ quâque horâ.

Infusion of Rhubarb. Hot. D.

℞. Rhei pulveris, 3 i;
Aquæ ferventis, Oij.

Macara et cola.

A small cupful to be taken at intervals, as a tonic and slight purgative.

Bitter Infusion of Rhubarb. H. of Germ.

℞. Rhei radicis concisæ, 3 iij;
Corticis aurantii, 3 ss;
Aquæ menthæ piperitæ, 3 iv.

Macara, cola et adjice,
Extracti gentianæ, 3 i.

To be taken during the day.

Purgative Potion. H. de Montp.

℞. Pulveris rhei, gr. xij;
Decocti chichorii, 3 iij;
Syrupi ejusdem 3 i.

Fiat potio, cujus capiat cochleare pro dosi. For children.

Potion of Rhubarb and Manna. H. Militaires.

℞. Pulveris rhei, 3 ss;

Aquæ, 3 iv.

Coque paulisper, cola et adde,

Mannæ, 3 ij.

To be taken at several doses.

BUCKTHORN.

A very energetic purgative, which should be administered to none but persons of a robust constitution. It is employed in dropsy, and as a vermifuge.

INTERNALLY. Berries entire and fresh. No. x—xx.

Decoction. No. xx—xxx in Oij of water.

The Juice expressed and fermented. P. 3 ij—iv.

Extract or Rob de Nerprun. P. ℥i—3 iss.

Sirop. P. 3 ij—3 i, and even more, in a purgative potion.

Purgative Potion. Hot. D.

℞. Syrupi rhamni, 3 i;
Tincturæ jalapæ comp., 3 ss;
Decocti chichorii, 3 iv.

Fiat potio.

To be taken at two or three doses, in dropsy.

Cathartic Potion. H. de Paris.

℞. Syrupi rhamni, 3 i;
Decocti pruni domestic. 3 iv.

Misce.

To be taken at two doses.

WHITE AGARIC.

A very violent purgative, but scarcely employed at present, on account of its uncertain action. It is sometimes used in cases of passive dropsies.

INTERNALLY. Powder. Gr. vi—xij, in pills.

Extract. P. Gr. ss—iv, in pills, generally united with some other purgative.

HEDGE HYSSOP acts as a drastic. It is not much employed at present*. The dose is, in *Powder*, gr. x—xxx, and, in *Decoction*, from that quantity to 3 ij in 3 viij in water.

BRYONY, applied externally, produces a rubefacient effect; when administered internally it acts as a drastic. The dose is, in *Powder*, gr. xii—℥i, and, in *Decoction*, from 3 ss to j in Oij of water.

Fecule Médicinale de Bryone. P. Gr. xij—3 ss.

B—SALINE PURGATIVES.

SULPHATE OF SODA. (Glauber's Salt.)

A mild purgative. It is employed in all cases in which it is necessary to induce alvine evacuations without producing general excitation, especially in febrile and inflammatory affections, jaundice, diseases of the skin, &c. When administered in doses too feeble for a cathartic, it acts as a diuretic.

* It has been administered with success in delirium tremens.—(See *London Medical and Surgical Journal* for January, 1832).

[The sulphate of magnesia or Epsom salts is now preferred to the above. The sulphate of soda, is still however, a popular remedy. T.]

Subst. incomp. The salts of barytes, &c.

INTERNALLY. As a cathartic, ℥j—Oj of water.

As a diuretic, ℥j—℥iv, with a third of nitre, in Oj of water, to be taken during the day.

Apozeme purgatif. P. To be taken in the morning, at several doses.

Tisan royale. P. Taken in the morning.

Purgative Potion. Hôt. D.

Rx. Sennæ foliorum, ℥ij;

Aquæ ferventis, ℥iv.

Macera, cola et adjice.

Sodæ sulphatis, ℥ss;

Syrupi rhamni, ℥j.

Fiat mistura.

To be taken in three doses.

The Ordinary purgative potion of the H. de S. Ant. contains only ℥iij of the sulphate.

Purgative Potion. H. of Germ.

Rx. Sodæ sulphatis, ℥j;

Sacchari, ℥ss;

Succi limonis, ℥jss;

Decocti gruti, Oj.

Dosis cyathus, singulis horis.

EXTERNALLY.

Purgative Enema. H. des Enf.

Rx. Sennæ foliorum, ℥ss;

Aquæ ferventis, Oj.

Macera, cola et adde,

Sodæ sulphatis, ℥ss.

Fiat enema.

The Purgative Enema of the H. de St. Ant. contains likewise ℥iv of honey.

Purgative Enema. H. de la Mat.

Rx. Sennæ foliorum, ℥ij;

Decocti lini ferventis, Oij;

Macera, cola et adjice,

Sodæ sulphatis, ℥ss.

Misce.

Lotion used in Porrigo. Swediaur.

Rx. Sulphatis sodæ, ℥vj;

Saponis amygdalæ, ℥iij;

Aquæ calcis, ℥xviij;

Spiritus rectificati, ℥vj.

Fiat lotio.

SULPHATE OF MAGNESIA.

It possesses the same properties as the sulphate of soda, and is administered in the same manner. It is a medicine very much employed.

Subst. incomp. The muriate of barytes, lime, ammonia, the subcarbonates of potassa, soda, &c.

INTERNALLY. ℥ij—℥jss in Oj of an aqueous vehicle, to be taken at two or three doses.

Compound Saline Powder.

Rx. Magnesiae sulphatis,

Sodæ muriatis, ā ā partes, iv;

— sulphatis, partes iij.

M. A tea-spoonful to be taken in a pint of water.

Purgative Powder. H. of America.

Rx. Magnesiae sulphatis,

Pulveris cinchonæ, ā ā ℥vj.

Divide in chartulas iv, quarum capiat unam secundā quāque horā.

Compound Purgative Potion. H. of Eng.

Rx. Magnesiae sulphatis, ℥iij;

Aquæ menthæ piperitæ, ℥ij;

Tincturæ jalapæ, ℥j;

Acidi nitrici, gut. x.

Fiat haustus.

Eau de Trêvez.

Rx. Sulphatis magnesiae, ℥j;

Antimonii tartratis, gr. ss;

Aquæ, Oij.

Cyathus omni horā capiendus donec alvus responderit.

Ferruginous Saline Mixture. H. of Eng.

Rx. Sulphatis magnesiae,

— sodæ, ā ā ℥v;

— ferri, gr. ij;

Aquæ ferventis, Oij.

Dosis ℥iv—viij bis in die.

EXTERNALLY.

Purgative Enema. H. of Germ.

Rx. Magnesiae sulphatis, ℥ss;

Olei lini, ℥iss;

Decocti anthemidis, ℥vj.

Misce.

SULPHATE OF POTASSA.

An active purgative; principally employed in small doses to diminish the secretion of milk after parturition, and in chronic diseases of the liver, &c.

INTERNALLY. As a purgative, ℥ss—j, in solution. As an antilactic, gr. x—℥j, in a powder, or dissolved in an acid vehicle.

Compound Digestive Powder. H. of Germ.

Rx. Potassæ sulphatis, ℥iv;

Pulveris rhei, ℥i.

Divide in chartulas x, quarum capiat unam vel duas quotidie.

[This was very commonly employed in fevers, and during the puerperal state, by the practitioners of the last century. T.]

Acid Mixture. H. of Germ.

Rx. Potassæ sulphatis, ℥ss;

Decocti hordei, Oij.

Solve et adjice,

Oxymellis simplicis, ℥j;

Aceti, ℥jss.

As a refrigerant. A small cupful at a time.

Potion Fondante. H. of Italy.

Rx. Potassæ sulphatis, ℥iij;

Infusi rhei, ℥vi.

M. A spoonful at a dose, as an antilactic.

CREAM OF TARTAR.

In small doses, this preparation of potassa is a temperant, in large ones it is a laxative

of a less disagreeable taste than other saline purgatives. It is very much employed.

Subst. Incomp. The sulphates of lime, and strong acids.

INTERNALLY. As a temperant, ʒ ij—iv in Oj of water, sweetened with sugar. [A small quantity of ginger or orange is added. This is the drink called imperial acid, and is employed in febrile and dropsical diseases. T.]

As a purgative, ʒ j—iv, in an electuary, or ʒ j dissolved in ʒ vj—viij of water.

Crema de Tartre Soluble. P. In the same doses.

A Laxative Temperant Powder. H. of Germ.

Rx. Potassæ supertartratis, ʒ iiij;
Potassæ nitratis, ʒ iiij;
Sacchari, ʒ iv.

Dosis ʒ j ad ij, omne mane ex cyatho lactis.

Compound Electuary of Sulphur. H. of Eng.

Rx. Potassæ supertartratis, ʒ iv;
Sulphuris, ʒ i;
Theriaceæ, ʒ iiij.

Dosis cochl. min. quotidie vel bis in die. [A favourite remedy in piles. Ginger or aromatic powder should be added. T.]

Lozenges of Cream of Tartar and Manna.

H. of Germ.

Rx. Potassæ supertartratis, ʒ ss;
Mannæ, ʒ iv;
Aquæ, ʒ x.

M. Boil to a proper consistence, and make into two lozenges.

Used as a laxative for children.

Solution of Cream of Tartar. H. of Germ.

Rx. Potassæ supertartratis, ʒ iiij—vj;
Aquæ ferventis, Oij.

Solve et adjice,

Syrupi rubi idæi, ʒ ij.

Misce.

To be taken during the day, as a laxative temperant.

The Limonade de Crema de Tartre of the H. de la Ch. only differs from the preceding preparation in the dose of the cream of tartar being increased to ʒ ij, and in containing no syrup.

Purgative Potion. H. of Italy.

Rx. Potassæ supertartratis,
Pulpæ tamarindi, ā ā ʒ j;
Aquæ, ʒ viij.

M. To be taken in two doses.

Imperial Ptisan. H. of Germ.

Rx. Potassæ supertartratis, ʒ ss;
Corticis aurantii, ʒ iiij;
Aquæ ferventis, Ovj.

Macera et cola.

A small cupful at a dose.

NEUTRAL TARTRATE OF POTASSA.

A gentle purgative, whose action is similar to that of the preceding preparations. It is employed in the same cases and in the same manner.

Subst. Incomp. All the acids, lime water, the muriate of barytes, &c.

INTERNALLY. ʒ ij—ʒ i, in an aqueous vehicle.

Laxative Drink.

Rx. Potassæ tartratis, ʒ ss.

Infusi chichorii intybi, Oij.

Solve et adjice.

Mellis, q. s.

Fiat mistura, cujus capiat cyathum vinosum sæpe in die.

TARTRATE OF POTASSA AND SODA

Possesses the same action and use as the preceding substances.

Subst. Incomp. The same as for the tartrate of potassa.

INTERNALLY. ʒ j—jss in an aqueous vehicle.

Powder of Fordyce.

Rx. Tartratis potassæ et sodæ, gr. x;
Pulveris rhei, gr. vj.

Divide in chartulas duas, capiat unam omni mane.

For children.

Saline Purgative Potion. H. de la Mat.

Rx. Tartratis et potassæ sodæ, ʒ vj;
Antimonii tartarizati, gr. i;
Aquæ florum aurantii, ʒ ij;
Syrupi mellis, ʒ i;
Aquæ, ʒ ij.

Fiat potio, dosis cochl. mag. tertiis horis ad alvi solutionem.

SUB-PHOSPHATE OF SODA.

A very gentle purgative; much employed on account of its tastelessness, and in the same cases as the preceding substances.

Subst. Incomp. Sulphuric, nitric, and hydrochloric acids, lime, magnesia, &c.

INTERNALLY. ʒ j—ij, in herb broth.

[It is also added to animal broth, instead of muriate of soda, when patients are delicate. T.]

Laxative Potion. H. of Germ.

Rx. Sodæ phosphatis,
Syrupi althææ, ā ā ʒ ss;
Aquæ, ʒ iv.

Misce.

To be taken in four doses, one every hour.

CALCINED MAGNESIA.

In large doses a gentle purgative; in small ones an ant-acid and absorbent. It is very much employed in cases of acidity of the stomach, dyspepsia, &c. Very useful in cases of poison by acids.

INTERNALLY. As a purgative, ʒ ij—ʒ ss. As an ant-acid, gr. vj—ʒj. As an antidote of concentrated acids, ʒ ij—iv, often repeated, diluted with water.

Absorbent Powder. P. Gr. xij—ʒij.

Tablettes de Magnésie. P. No. iv—vj.

Tablettes de Magnésie et de Cachou. P. No. iv—vj.

Absorbent Powder. H. de la Mat.

R_x. Magnesiae, gr. xvj;
Pulveris cinnamomi, gr. ij.
Divide in chartulas ij, in die sumendas.
In cases of diarrhoea of children.

Ant-acid Powder. H. of Germ.

R_x. Magnesiae calcinatae, ʒ ss;
Corticis aurantii,
Sacchari, ā ā ʒ j.
Divide in chartulas ij, capiat iij vel iv
quotidie. [See *Bismuth*. T.]

Ant-acid Mixture. Ryan.

R_x. Liquoris calcis, ʒ vi—vii;
—— potassae, ʒ iss—ij;
Magnesiae calcin. ʒ j.

Sit mistura, cujus sumat cochl. amplum
ex lactis recentis vel jusculi bovini poculo,
ter in die.

*In pyrosis, when the fluid ejected is acid, and
when the urine deposits a reddish or pink sedi-
ment, which is lithic acid.*

[A drachm of laudanum, or the sedative
solution of opium, with m v of ol. menth. is
added when flatulence, gastrodynia, or
spasm of the stomach or intestinal canal is
troublesome. I have found this combina-
tion extremely efficacious. T.]

Purgative Potion for Children. H. of Amer.

R_x. Magnesiae calcinatae, ʒ ss;
Pulveris rhei, gr. vj;
Sacchari, ʒ j;
Olei menthae piperitae, gut. vj;
Aque, ʒ jss.

Dosis cochl. min. secundâ quaque horâ.

[There is evidently too much peppermint
in this mixture—one drop would be suffi-
cient for an ounce and a half of vehicle. T.]

SUBCARBONATE OF MAGNESIA.

It possesses the same action, and is em-
ployed in the same cases as the calcined
magnesia. The preference is given to it in
cases of gravel dependent on a superabun-
dant of uric acid, &c. It is used in effe-
rescent drinks.

INTERNALLY. ʒ ss—ij, and more, sus-
pended in a potion.

PURGATIVE MINERAL WATERS.

In small quantities, tonics and excitants,
in large ones, purgatives. Externally they
are used as stimulants, in baths.

Water of Balaruc.

INTERNALLY. As a purgative.

As an excitant.

EXTERNALLY. Baths, lotions, fomenta-
tions.

Eau de Balaruc artificielle. P. Same
doses.

Water of Epsom.

INTERNALLY. From two to four glasses
daily.

Water of Sedlitz.

INTERNALLY. From one to four glasses
daily.

Strong artificial Eau de Sedlitz. P. From
one to two glasses a day.

Weak artificial Eau de Sedlitz. P. From
three to four glasses daily.

C—LAXATIVES.

CASTOR OIL.

Recently prepared, castor oil is a gentle
laxative, and very much employed, when
the effects of an irritating substance might
prove injurious to the gastro-intestinal mu-
cous membrane. It is administered in cases
of inflammation of the digestive canal. When
this oil has been kept too long it is very ir-
ritating and becomes drastic. It is employed
with much advantage as an anthelmintic. It
appears to have a special action upon intes-
tinal worms, and destroys them.

INTERNALLY. ʒ ss—ij, at several doses,
in a syrup, a cup of broth, or any other ve-
hicle.

Purgative emulsion of castor oil. P. Taken
at two doses. [It is made with yolk of egg,
as in this country. T.]

Purgative Potion. H. de la Ch.

R_x. Olei ricini,
Syrupi rhamni, ā ā ʒ ij;
Aque menthae, ʒ j.

Misce.

To be taken in two doses.

*The purgative potion of castor oil of the Hôt.
D. differs from the preceding by the syrup of
buckthorn being replaced by ʒ j of tartaric
syrup, and the mint water for ʒ ij of the
decoction of chichory.*

*The purgative potion of castor oil of the H.
St. Ant. contains ʒ ij of acacia gum, and
ʒ ij of water instead of the decoction of
chichory.*

*The potion of castor oil of the H. de la Ch.
contains ʒ ij of the syrup of chichory instead
of that of buckthorn, and ʒ ij of mint water
instead of one,*

*The purgative potion of the H. des Vén. is
composed of castor oil and the syrup of
chichory, of each ʒ i.*

Laxative Potion. Hôt. D.

R_x. Olei ricini, ʒ vj;
Oxymellis scillae, ʒ ss;
Syrupi rhamni, ʒ j.

Fiat haustus.

[Castor oil is frequently combined with
oil of turpentine and croton oil in obstinate
cases of constipation, in puerperal peritonitis,
painters' colic, tapeworm, &c. T.]

Laxative Oily Mixture. H. of Germ.

R_x. Olei ricini,
Syrupi aurantii, ā ā ʒ j;
Saponis amygdalae, ʒ iv.

Misce.

M. Dosis cochl. mag. singulâ semihorâ.
EXTERNALLY.

Enema of Castor Oil. H. of England.

R_x. Olei ricini,
Mellis, ā ā ʒ j;
Decocti hordei, ʒ x.

Fiat enema.

Employed as a vermifuge.

CASSIA.

A laxative and temperant. It is useful in the course of inflammation, to keep the bowels open. It acts very mildly; but sometimes causes colics and flatulency. It is a very commodious medicine for children and delicate females.

Subst. incomp. Alcohol.

INTERNALLY. The root peeled, \mathfrak{z} j—ij.

Decoction, \mathfrak{z} ij—iv to Oij of water, a small cupful at a dose, as a laxative and temperant.

Extract. P. \mathfrak{z} ss—j.

Confection of Cassia. P. \mathfrak{z} ij— \mathfrak{z} j.

Marmelade de Tronchin. H. de la Ch.

Rx. Pulpæ cassiæ,
Maunæ,
Olei amygdal. dulcis, \mathfrak{a} \mathfrak{a} \mathfrak{z} ij;
Aquæ florum aurantii, \mathfrak{z} ij.

Misce.

Dosis cochl. mag. singulis horis.

As a laxative.

Cassia Water. H. de la Ch.

Rx. Decocti cassiæ, Oij;
Sulphatis magnesiæ, \mathfrak{z} j;
Antimonii tartratis, gr. iij.

Misce.

To be taken during the day, in the treatment of painters' colic.

Purgative Potion. H. de Montp.

Rx. Pulpæ cassiæ,
Syrupi chichorii, \mathfrak{a} \mathfrak{a} \mathfrak{z} j;
Decocti papaveris, \mathfrak{z} viij.

Misce.

To be taken in three or four doses.

Potion Minorative de Boerhaave.

Rx. Pulpæ cassiæ, \mathfrak{z} j;
Pulveris rhei, gr. ij;
Syrupi flor. amygdal. persicæ.
q. s.

Misce.

Given to new-born infants to evacuate the meconium. A small quantity should be put on the end of the finger and introduced into the mouth.

Laxative Enema. H. de la Mat.

Rx. Cassiæ, \mathfrak{z} ij;
Aquæ, Oiv.

Decoque et cola.

TAMARINDS.

Refrigerant and slightly laxative. It is employed with advantage on account of its latter quality, in cases in which it is necessary to produce a laxative effect without irritating the intestinal mucous membrane. It is generally united with some other purgative.

Subst. incomp. The sulphates of potass, the alkaline carbonates, lime water, and the tartrate of antimony.

INTERNALLY. The pulp, \mathfrak{z} i—iv in a bolus.

Infusion, from \mathfrak{z} i—ij to Oij of water. This is an agreeable drink, and very useful in febrile diseases.

Decoction, \mathfrak{z} ij—ij to Oij of water, to be taken during the day, as a slight purgative.

Decoction of Tamarinds. P. A glassful every hour.

There is also a decoction in veal broth.

Compound Decoction of Tamarinds. Swediaur.

Rx. Pulpæ tamarindi,

Uvæ, \mathfrak{a} \mathfrak{a} \mathfrak{z} iij;

Aquæ ferventis, q. s.

Coque ad Oij. et colaturæ adde,

Antimonii tartarizati, gr. ss;

Syrupi mori, \mathfrak{z} iss.

Dosis \mathfrak{z} ij—iv omni horâ.

Tamarind Whey. H. of Italy.

Rx. Pulpæ tamarindi, \mathfrak{z} i;

Seri lactis, Oi.

Decoque et cola.

The dose is a glassful at a time as a refrigerant.

Laxative Potion. H. of Germ.

Rx. Pulpæ tamarindi, \mathfrak{z} iij;

Aquæ, \mathfrak{z} xij.

Decoque ad \mathfrak{z} x cola et adjice,

Mannæ, \mathfrak{z} ij.

To be taken at two or three doses.

MANNA.

A gentle purgative, which is very much employed in inflammatory diseases, when there would be danger in using a more energetic purgative. It is a very useful laxative for children of feeble constitutions. It is very much employed, and often combined with other purgatives.

INTERNALLY. From \mathfrak{z} j—ij, in water, or in milk.

Pectoral Electuary.

Rx. Mannæ, \mathfrak{z} j;

Aquæ florum aurantii, q. s.

Tere in mortario et adde,

Pulveris acaciæ, \mathfrak{z} ss;

Extract glycyrrhizæ, \mathfrak{z} j;

Syrupi capillariæ, q. s.

Dosis cochl. mag. sæpe ad effectum.

Electuary of Manna. H. of Germ.

Rx. Mannæ, \mathfrak{z} iij;

Olei amygdal. dulc., \mathfrak{z} j.

Tere simul et adde,

Syrupi gummi, \mathfrak{z} j.

Dose \mathfrak{z} j—iv, given to infants, as a gentle laxative.

Potion of Manna. H. de la Ch.

Rx. Mannæ, \mathfrak{z} ij;

Aquæ, \mathfrak{z} vi.

Divide in doses ij.

Compound Potion of Manna. H. de la Ch.

Rx. Mannæ, \mathfrak{z} ij;

Pulveris rhei, \mathfrak{z} ss;

Aquæ ferventis, \mathfrak{z} iv.

Macera, cola, et divide in dosis ij.

Purgative Potion. H. des Vén.

R_x. Mannæ, ʒ ij;
Sennæ, ʒ ij;
Sodæ sulphatis, ʒ ijss;
Decocti cichorii, ʒ vj.

Infuse the senna in the decoction of succory, add the manna, strain, and dissolve the sulphate of soda.

The *Purgative Poti* of the H. des Enf. differs from the preceding in containing only ʒ j of manna, to ʒ iv of water, and in the dose of senna being ʒ ij instead of ij.

Emulsive Potion. H. de Paris.

R_x. Mannæ, ʒ ij;
Amygdal. dulc., ʒ iv;
Syr. flor. amygdal. persicæ, ʒ j;
Aquæ florum aurantii, ʒ iv;
Infusi glycyrrhizæ, ʒ iv.

Sit emulsio.

The dose is a spoonful every quarter of an hour. This is a very commodious preparation for women and children.

Purgative Whey. H. of Germ.

R_x. Mannæ, ʒ j;
Potassæ supertartratis, ʒ ss;
Seri lactis, ʒ vj.

Misce.

To be taken at two doses, at two hours' interval between each dose.

Syrup of Manna. H. of Germ.

R_x. Mannæ, ʒ v;
Aquæ, ʒ xij.

Liqua et adjice,
Sacchari, lbj.

Coque. In doses of ʒ ss—j.

MERCURIALE (MERCURIALIS ANNUA).

An emollient and laxative, not much employed internally; but frequently administered in an enema.

INTERNALLY. *Compound Mercurial Honey.* P. ʒ j—ʒ j, as a laxative.

EXTERNALLY. *Mercurial Honey.* P. ʒ ij—iv, in an enema.

Laxative Enema. H. des Vén.

R_x. Decocti lini, lbj;
Mellis mercurialis annuæ, ʒ ij—iv.

Dissolve.

COMMON HONEY also acts as a slight laxative. It is used to sweeten drinks. It is employed in the composition of several officinal préparations, such as ROSE HONEY, the OXYMEL of SQUILL, &c.

The petals of the PALE ROSE enter also into the composition of several officinal preparations, such as—

The *Sirup of Pales Roses.* P., which is given in doses of ʒ ij—ʒ j, to purge children; it is also used to sweeten laxative potions.

The *Onguent Rosat.* P., used in excoriations of the mamma and the lips,

And the *Distilled Rose Water.* P., which is used as the ordinary vehicle for resolvent collyria, or which serves as an aromatic for other medicines,

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PEACH FLOWERS have a feeble laxative action; from them is prepared a sirup which is used as a purgative for children.

CHAPTER XIV.

MEDICINES EMPLOYED AS REFRIGERANTS.

LEMON (JUICE).

A TEMPERANT, daily employed to quench the thirst of patients in acute diseases, especially of the abdominal organs. It is useful in certain cases of vomiting, jaundice, scurvy, &c.

Subst. incomp. Sulphuric, nitric, tartaric, and oxalic acids, lime water, &c.

INTERNALLY. *Lemonade.* The juice of one lemon to Oij of water, sweetened.

Sirup of Lemons. P. ʒ j—ij, in an aqueous vehicle.

Vegetable Lemonade. H. de Paris.

R_x. Citri medicæ, No. j;
Syrupi communis, ʒ ij;
Aquæ, Oij.

Misce.

To be taken during the day, a glassful at a dose. It is a drink very useful in acute inflammations of the stomach.

The *Limonade Citrique* of the Hôt. D., and de la Ch., do not differ from the preceding.

The *Limonade Cuite* of the H. de Paris is also similar; it is prepared with hot water, in which has been dissolved a small quantity of the bitter principle of orange peel.

Julep of Lemon Juice. H. of Eng.

R_x. Succi limonis,
Aquæ menthæ viridis, ā ā p. e.
Dosis ʒ j, bis vel ter in die in aqua hordei.

Compound Ptisan of Lemon. H. of Germ.

R_x. Lemonum pulpas, No. ij.
Corticibus seminibusque pruis remotis, dein contunde pulpas in mortario vitreo et adde gradatim,

Decocti hordei, Oij;
Panis tosti, ʒ ij;
Syrupi mori, ʒ j;
Vini rubri, ʒ vj.

Cola.

A small cupful at a dose.

Acid Mixture with Oil. H. of Germ.

R_x. Succi limonis,
Olei lini recentis, ā ā ʒ iij;
Extracti Opii, gr. iv.

Misce.

Dosis cochl. mag. singulâ semihorâ.
In cases of strangulated hernia.

EXTERNALLY.

Acidulated Collutorium. Swediaur.

R_x. Succi limonis, ʒ ss;
Sacchari, ʒ j;
Infusi lini, Oj.

Misce.

Antiscorbutic Collutorium. H. of Italy.

Rx. Succī limonis,
Sacchari, ā ā ʒj;
Vini rubri, Oj.

Misce.

CITRIC ACID.

The same action and use as lemon juice.

INTERNALLY. *Lemonade.* ʒj in Oj of water, sweetened.

Tablettes d'Acide Citrique. P. q. q.

dry Lemonade. H. de Montp.

Rx. Pulveris acidi citrici, ʒvj;
—— sacchari, lbj;
Olei limonis, q. s.

Misce.

The dose is a tea spoonful in ʒ viij of water.

TARTARIC ACID.

In large doses an irritant; in small ones, a refrigerant. It is employed with advantage in cases of gastric irritation, fevers, &c.

Subst. incomp. Lime water, the sulphates of barytes and strontian.

INTERNALLY. *Powder.* Gr. v—xv, with sugar.

Solution, ʒss—j to Oij of water, sweetened.

Sirup. P. ʒj—ij to Oij of liquid.

Tartaric Lemonade. H. de Paris.

Rx. Syrupi acidi tartarici, ʒij;
Aque, Oj.

Dissolve.

A small cupful at a dose.

The *Limonade Vegetable* of the Hôt. D. and de la Ch. contain the same quantity of tartaric syrup to Oj of water.

Dry Tartaric Lemonade. H. of Germ.

Rx. Pulveris acidi tartarici, ʒij;
Sacchari, ʒ viij;
Olei limonis, gut. viij.

Misce.

The dose is ʒj—ʒss in ʒ viij of water.

Acidulated Potion. H. Militaires.

Rx. Acidi tartarici,
Etheris nitrici, ā ā ʒss;
Syrupi communis, ʒj;
Aque, ʒvj.

Misce.

Dosis ʒss sæpe in die.

VINEGAR, OR IMPURE ACETIC ACID.

It is never employed internally in a concentrated state. Its vapour only is respired in cases of syncope, &c. Diluted with water, it is a refrigerant, which is very frequently employed. It is also used as a vehicle for other medicines. Externally, it is employed as a detergent and percussive.

INTERNALLY. ʒss—ij in Oij of water, or rather in such a quantity as to make an agreeable acid.

Simple Oxymel. P. ʒij—ʒj, and more, in an aqueous drink.

Syrup. P. ʒj—ij, to sweeten diluted drinks.

Oxyerat. H. of Paris.

Rx. Aceti, ʒij;
Aque, Oj.

A small cupful at a dose.

Refrigerant Mixture. H. of Germ.

Rx. Aceti, ʒij;
Mellis, ʒij;
Aque, Oiv.

Misce.

A small cupful at a dose.

Acidulated Gargle. H. des Vén.

Rx. Aceti albi, ʒij;
Mellis rosæ, ʒvj;
Decocti hordei, ʒvj.

Misce.

In the *Acidulated Gargle* of the H. de la Ch. the vinegar is replaced by q. s. of acetic acid.

Acetous Gargle. M. de Santé.

Rx. Aceti, ʒij;
Hydrochl. ammoniæ, ʒj;
Mellis, ʒjss;
Aque, ʒxij.

Fiat gargarisma.

Oxymel Gargle. H. St. Ant.

Rx. Oxymellis simplicis, ʒj;
Decocti hordei, Oj.

Misce.

Oxymel Enema.

Rx. Oxymellis simplicis, ʒiv;
Aque, Oj.

Misce.

Employed as a refrigerant and slight laxative.

Resolvent Fomentation. H. of Germ.

Rx. Aceti,
Alcoholis, ā ā ʒiv;
Ammoniæ, hydrochl., ʒj.

[PYROLIGNEOUS ACID is now employed with success in cutaneous diseases and superficial ulcers. T.]

BORACIC ACID.

A calmant and refrigerant, not much used except in gargles in gangrenous angina.

INTERNALLY. Gr. x—ʒss in Oij of water, as a refrigerant drink.

Calmant Potion. H. de la Mat.

Rx. Acidi boraccii, ʒj;
Syrupi simplicis, ʒjss;
Infusi althææ, ʒiv.

Misce. Dosis ʒj secundis horis.

In cerebral affections in children.

Sedative Boluses. H. of Germ.

Rx. Acidi boraccii, ʒss;
Confectionis aurantii, ʒj;
Syrupi simplicis, q. s.

Divide in bolos vi.

OXALIC ACID.

Concentrated and in large doses, it is a very energetic corrosive poison. Diluted with water, and in large doses, its deleterious action is on the nervous system. Nevertheless, it is sometimes employed, in small doses, as a temperant; but it would be much better to use citric or tartaric acid.

INTERNALLY. Gr. xij—ʒj in Oij of water sweetened.

Pastille Citrique. P. No. iij—iv.

The OXALATE ACID OF POTASS, or Salt of Sorrel, acts in the same manner as the refrigerants; it is not much used. It may be administered in doses of 3ss—j in Oij of water.

(To be continued.)

Reviews.

The Medical Quarterly Review. No. VII.
April 1835. London: Souter.

WE have much satisfaction in bearing testimony to the merits of this ably conducted journal, the present number of which excels all that have preceded it. The editor has judiciously diminished the number, and extended the limits of the reviews, several of which not only present an excellent critical analysis of the work commented upon, but involve something like an original essay on the subject.

Among the original communications is an account, by Mr. Howship, of a tumour induced by hæmorrhage from rupture of the nutritious artery within the femur.

The case is interesting from its singularity, and the resemblance of its symptoms to those of fungoid disease. We extract the account of the progress of the case, and the dissection, omitting the writer's comments, for which, though worthy of attention, we have not space.

"Sept. 17th, 1832. M. W., aged twenty-three years, about five months since, in descending a staircase, passed down two stairs, instead of one, by mistake; and, as she thought, strained her right knee, on the inner side. She described the injury as confined to a spot exactly beneath the central part of the vastus internus muscle; not at first painful or tender on pressure, but situated, as she said, within the bone. More or less occasional pain, and progressive tumour, were the consequences of the accident; the pain, swelling, and lameness still increasing, notwithstanding the means used for her relief. Her father said that for some time, latterly, she had suffered dreadfully.

"By the kind attention of Mr. Anderson, who, towards the conclusion of the case, had seen the patient, I was not only enabled to be present at the examination, but also, with the father's consent, to remove the bone, for more minute subsequent investigation.

"The tumour was situated just above the knee, on the inner front of the thigh, the size of a moderately large melon; diminishing as it extended upwards, terminating just above the middle of the femur, and yielding

an obscure fluctuation. The leg and foot were loaded with œdema. The integuments (which were healthy), when laid aside, exposed the tense fascia, within which a fluctuation was now more distinctly perceived. The fascia, and thin substance of the expanded muscles beneath, being divided, the cyst was laid open, from which a quantity of bloody serum flowed out. The opening being freely enlarged, the contents of the tumour appeared to be traversed by fine membranous septa, whose interstices were filled with grumous blood, masses of fibrine, and serum. In several parts, large coagula of blood were found, confined by a thin film of expanded cellular membrane. The membranous expansions in some parts were rather more firm than in others: at one point was observed, to a trifling extent, a fine lamina of a cartilaginous substance.

"The femur, for the extent of the tumour, was exposed: it felt rough, and at the lower part was extensively laid open, by the active operation of progressive absorption, by which the inner condyle was nearly destroyed. Upon the linea aspera, a light and delicate osseous fabric had for some extent been deposited. Several portions of the detached periosteum were recognized in the tumour, involved in the fibrinous blood; the medullary cavity of the bone being filled with coagula. The lower part of the femur was brought away, and laid in water, to macerate.

"Nov. 15, 1832. I called upon the father and sister; from whose account I set down the following particulars.

"About ten days after the accident, she first felt a little pain, which was compared to rheumatism; at that time she walked as well as ever, and till a month afterwards, when she first began to walk occasionally lame.

"About a month after the injury, walking with her sister, she suddenly stopped, and said 'Oh dear me; what a pain I have got in the knee! I do not think I can go any further.' In a short time this pain went off, and she reached home very well. The part now began to swell a little, and was somewhat tender above the knee, if pressed.

"Seven weeks after the accident, she left the family with whom she had lived, and came home; and, in walking to her own house (a distance of nearly two miles), said she felt a throbbing pain; but it was trifling. For the following three weeks she could bear, and walk, upon the limb, as firmly as ever. She repeatedly had leeches, blisters, and poultices applied.

"On the 18th of June, she went into St. George's Hospital, where she staid about a month, using the means just mentioned, and also applying, as it appeared, an ointment containing tartarized antimony. Urged to submit to amputation, she left the hospital and returned home.

"About six weeks before she died, a day

tinguished surgeon kindly visited her, at her own house, and assured her that 'if she were the queen of England, and worth the Indies in gold, no medical man could do her any good;' and humanely cautioned her, therefore, not to go to any expense with this view.

"At that time the tumour, very large, was always in pain: if, at any time, she dropped off to sleep for a few minutes, she would jump up suddenly, as if a dart had shot through her thigh. She moaned much in her sleep, and, if awake, was often convulsed, as if in a fit; when her father, perhaps, inquiring 'Mary, are you in pain?' she would reply, 'Yes, father: I am quite sensible.'

"She frequently felt severe pains, like pins and needles, passing rapidly upwards, from the toes to the hip, and through to the back; the limb, towards the close of her sufferings, becoming swelled, and oppressed with œdema.

"For the last nine or ten weeks, she was not able to stand at all; yet was said to have been but little feverish, to the last; although latterly, she took large and frequent doses of laudanum, with scarcely any effect, her sufferings frequently inducing her to pray earnestly for death.

"The femur, cleared from the soft parts, presented the following appearances. The cylinder of the bone was not enlarged, but had lost much of its substance, by progressive or interstitial absorption, which had entirely removed the anterior and internal portions of the inner condyle, exposing the cancellated structure, also extensively destroyed by the same agency; so that, of the internal condyle, the thin articular surface, covered by its cartilage, was nearly all that remained. Neither had the fine vascular membranes lining the longitudinal canals, within the compact substance of the shaft of the bone, been less active; for these canals, extensively and considerably enlarged, had at certain points become united laterally with each other, inducing a loss of strength to the solid bone, with numerous openings upon its external surface.

"Upon the *linea aspera*, new bone had to some extent been deposited; but on no other part of the femur.

"An attentive examination of this preparation demonstrates, that absorption had commenced within the medullary cavity; the internal parts having suffered most materially, the substance of the cylinder less, and the outer surface least; proving that the cause of the disturbance and destruction of the osseous fabric must have been seated within the cancellated cavity. Even in those parts where the cancellous structure yet remains, in the seat of the disease, its condition is entirely changed; for, if observed with a good magnifying glass, it will be perceived that, instead of a reticulated texture of rounded fibres, the whole is re-

duced, apparently from pressure, to so many exquisitely fine, thin, flattened plates, here and there entirely disappearing, in consequence of absorption having completed their removal.

"From the above recent and ultimate appearances of this disease, illustrated as they are by the previous symptoms, there seems no reason to doubt that the whole was the progressive effect of continued pressure and excitement, disturbing the healthy functions, first within the medullary cavity, and subsequently among the soft parts beneath the fascia of the thigh, consequent to the rupture of some branch of the nutritive artery of the bone; and that the case may therefore be regarded as an instance of progressive internal hæmorrhage."

There are several other communications of considerable interest, from which we regret that we cannot make any excerpts.

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The American Cyclopædia of Practical Medicine and Surgery; a Digest of Medical Literature. Edited by Isaac Hays, M.D., Surgeon to Wills' Hospital, Physician to the Philadelphia Orphan Asylum, &c., &c. Part VI. Philadelphia, January, 1835. 8vo. pp. 120. Carey, Lea, and Blanchard.

THE editor of this valuable work has long and ably conducted one of the best, most comprehensive and useful of medical periodicals—our respected contemporary, the *American Journal of the Medical Sciences*. He is also the translator of Broussais' works, and an original author of great reputation. He is assisted in the execution of the work before us, by several of the most eminent professors in America. This Cyclopædia differs widely and materially from every medical dictionary in our language, and from most of those in the French and German. It not only comprises medicine and surgery, but obstetrics, descriptive, surgical, and pathological anatomy, physiology, toxicology, legal medicine, and therapeutics. It may justly be designated "Library of the Medical Sciences."

Before we offer our opinion on the execution of this national work, we shall insert the terms of its publication. It is published in parts averaging 112 pages each, and illustrated with numerous wood-cuts. It is expected to be completed in forty parts, which will make eight volumes of 560 pages each. The parts will be published at as short intervals as possible. The price of each part is

about two shillings and three pence, or five dollars for ten parts.

On a careful perusal of the present number, which contains no less than fifty articles, we cannot but observe, that almost all are treated far too superficially. The exceptions are Angustura Bark, Ankle, which occupies fifteen closely-printed pages, Anthrax occupying seven, Antimony thirty-five, and Anus (unfinished) thirty-three.

The greater number of the articles have been written by the editor; and we feel convinced, that the very summary way in which he treats most of them is to be ascribed to the narrow limits which he has prescribed to the work. This alone can explain the unsatisfactory manner in which the articles Animalcule, Animalization, and Animism, are executed. We offer this stricture more in regret than for the purpose of finding fault, as we really think that twice the space allotted to the size of this work would not be adequate for its proper execution. If instead of 4480 pages, the proprietors allowed double the number, then and only then could the work give even a condensed view of the present state of the many sciences which it embraces. Suppose it extended to eight volumes, the size of Cooper's Surgical Dictionary, it would not exceed the amount allotted by the French cyclopedists to medicine and surgery exclusively.

In making this statement we beg to be understood that nothing is farther from our intention than the slightest idea or wish to depreciate this production. It is in fact infinitely superior and more useful than any other in our language, as it embraces much more matter than any work of the kind with which we are acquainted. As a dictionary of terms of medicine, surgery, obstetrics, and therapeutics, it is unequalled by British works. It is of course less comprehensive on medicine than Dr. Copland's Dictionary, or the Cyclopædia of Practical Medicine, works exclusively devoted to this subject; but to those about to commence the practice of the healing art, who have lately left the schools, and will base their therapeutical views on anatomy, physiology, and pathology, the American Cyclopædia presents to their minds these sciences in a concise yet comprehensive form, with all that is valuable in remedial means.

If this work were illustrated by plates on the different subjects of which it treats, it would have a most extensive circulation both in this and every civilized country in which medicine is cultivated. We entertain the expectation that this object will be effected at no distant period in London.

We are not disposed to be querulous; but in a work similar to the American Cyclopædia of Medicine, on which there are at least fifty eminent writers and professors engaged, we can scarcely excuse sins of omission.

We inform our transatlantic contemporaries, that at this side of the ocean all is not gold that glitters; and we remind them of this adage, as we observe they have passed over the works of Dr. O'Beirne and Mr. Salmon, while they have quoted others pirated from them.

Upon the whole, there is great labour, research, and experience evinced in this production, and we most cordially wish it success.

Foreign Medicine.

Outline of M. Rostan's Lecture on the Diseases of the Nervous Centres.

IN his present course of lectures on this subject, M. Rostan first called the attention of his hearers to the chief foundations of organic medicine, namely, that nothing is found in man but organs in exercise: that when these organs are sound, the functions—that is, the movements of the organs—are also sound; that if the organs are altered, their movements are irregular, the functions are in a morbid condition, &c., &c. Applying these axioms to the diseases of the nervous centres, M. Rostan proposed to elucidate the particular pathological disturbances to which this organ is liable; previous to which, however, it is necessary to establish the brain as a compound organ, presiding over different acts. M. R. himself holds it as a truth, that each function of the encephalo-spinal axis is produced by a specific organ, acting as it were in an isolated manner. Thus, maniacs retain all their power of movement, though their intelligence is disturbed. On this subject the lecturer quoted the experiments of Foville, Delaye, Pinel, Grandchamp, and others. The first order of pathological conditions of the nervous centres comprehends

Alterations of Movement.

These may be general or partial, permanent or transitory, varied in a thousand ways. In studying them, the following considerations should previously be weighed and influence our reasoning.

Movement may be altered both by a lesion of the organ which executes it, and of the organ which commands it, or of the organ which transmits the command. Though the action of the muscles is frequently augmented in the diseases of the nervous centres, this does not hold in the majority of the disorders to which man is subject, as we see in the premonitory symptoms of the most acute febrile affections, typhus fever, small pox, &c. Tremor of the limbs may be produced by various causes, as the abuse of spirits or mercury, the action of cold; and is a character of old age. In all these instances, are we to consider it as independent of all organic lesion? Bichât and his followers beheld in it only a perversion of contractility, but M. Rostan recognises it as the effect of a more or less appreciable modification of the nervous centres—a modification which, for instance, cannot be denied in the case of senile trembling.

He then remarked upon the density of the brain of old persons, its tendency to become of a brownish colour, the shrinking it seems to undergo, the retreat it makes before the thickening of the diploe, and the invasion of it by the internal table of the skull bones &c. He recalled the other organic changes, which it is easy to detect in the principal nervous cords, and confidently deduced from the whole, that the functional disorders mentioned (tremors) are in every case referable to an appreciable organic modification.

The stiffness and contracted state of the limbs, which have been advanced by some authors as pathognomic signs of softening of the nervous centres, is also attendant on cerebral hemorrhage.

Convulsions have been divided into tonic and clonic; in the former the muscular contraction is permanent, and causes a complete immobility; in the latter the contraction alternates with relaxation, and the convulsed parts are troubled by incessant shocks.

Tetanus belongs to the class of tonic convulsions. Here there is organic change; for the functional disorder is of continuance. For a long time this was denied. "There are some observers," said M. Rostan, "who seek only a negative result from a post mortem examination. They cannot or they will not ascertain the existence of numerous lesions, which would attract on the very onset, the attention of the most common-place observer." M. Rostan is of opinion that the organic modification concomitant with tetanic phenomena, has its seat in the membranes of the spinal marrow. This modification is the result of an inflammatory process, so that no very well defined difference between tetanus and myelitis can be drawn.

In catalepsy and chorea, the alterations which the nervous centres undergo, though transitory and difficult to fix upon, are nevertheless real in existence.

Picking of the bed clothes (carphology)

occurs chiefly in meningitis, meningo-encephalitis, and typhoid fever. In this too there is alteration of the nervous substance, which if we are at times unable to appreciate, the imperfections of our means of anatomical investigation, rather than the principles laid down, are to be accused.

It has been said, and is daily repeated, that in persons who sink under epilepsy, the organic modifications bear no relation to the symptomatic disorders. But the very fact of epileptic attacks being periodical, demonstrates that the organic modification is not permanent, and is therefore not likely to be easily if at all detected after death; the objection therefore strengthens the organic doctrine. The alterations attendant on epilepsy have not been hitherto discovered. M. M. Baubet and Cazauviel, in their monograph on this subject, have mistaken one of the effects of the disease for its cause: they have not considered that the congestion about the meninges and the brain during the fit is induced by the same cause as that which makes the face and limbs suffused and turgid. Neither can the cartilaginous state of the medullary enveloping membranes account for the symptoms of epilepsy; for the organic change, like the symptoms it begets, must necessarily be fugacious.

Passing to the subject of paralysis, M. Rostan remarked, that by a proper appreciation of that condition, the diagnosis of cerebral affections may be satisfactorily established, though more than one modern pathologist have slighted the deductions that may be drawn from this most interesting of functional perversions. For a long time paralysis was supposed to be a disease altogether sui generis, and in some way independent of any organic lesion of the nervous centres. This was the error of Pinel, Landré-Beauvois, and others, an error fraught with the grossest therapeutical mistakes. In 1785 the Académie des Sciences commissioned Mauduyt and Halle to experiment on the effects of electricity in paralysis; and it is plain from the words of the commission, that the Academy regarded it as a specific complaint, no mention at all being made of its organic origin.

According to M. Rostan, paralysis is as sure a guide in cerebral diseases, as are the râles and other auscultic signs in thoracic disease. It is only since the year 1815 that this proposition has been appreciated, and that the reverse one of the essentiality of paralysis has been at all subverted.

When paralysis is general, when it affects indiscriminately all the agents of motion, it does not form so positive a sign as when it is partial; for then the whole encephalon is involved, unless indeed it be only the mesocephalon (tuber annulare). Palsy is also general in congestions, in meningitis terminating in a copious serous effusion; in syncope, asphyxia, narcotism, intoxication, hysteria, — General palsy may

depend on congestion of the brain and immoderate hemorrhagic effusion, both acting by compressing the pulpy substance of the encephalon.

In cerebral congestion, the palsy supervenes suddenly; but in a few hours, or at most in a few days, the patient recovers his motor faculty. Such, however, is not the case in the palsy arising from a considerable sanguineous effusion.

A knowledge of the circumstances preceding the general palsy, is sufficient to distinguish meningitis as a cause.

In syncope, the paleness of the surface, the absence of the pulse, the slow and scarcely perceptible respiration, diagnosticate with sufficient accuracy.

In asphyxia, as also in narcotism, a knowledge of the influence that has been applied, and some special signs that will be hereafter mentioned, aid the physician in the appreciation of the organic modifications that determine the palsy.

The smell of spirits from the mouth, and the vomiting of characteristic matters, render the paralysis from intoxication perfectly recognisable.

Hysteria and epilepsy always present a series of convulsive symptoms, that precede the resolution of the powers, and the paralytic attack.

In cerebral hemorrhage there are no precursory symptoms: the palsy is permanent. If we desire to inquire into the exact seat of the sanguineous effusion, we must first determine whether the palsy was in the first instance local or general. In the former case, the probabilities lean to the conclusion that a considerable hemorrhage has taken place into the ventricular cavities, and produced compression. In the latter case, we have every reason to suspect hemorrhage in the central portions of the brain.

As yet, there are but few cases of general softening of the nervous centres; but in all those of which we have any knowledge, the paralysis has had precursory signs, that announce an evident morbid process.

With regard to local palsy, it is opposed to encephalic alteration. This fact, though contested by some minds with retrograde tendencies, has been well known from the time of Herophilus downwards. It has been said that when hemorrhage occurs in the posterior lobes of the brain, it causes paralysis of the side corresponding to the lobule affected. But M. Rostan remarks with reason, that nothing is more easy than to err on this subject; for he has again and again seen the best informed clinical observers fall into mistakes concerning it. He is therefore inclined to place but small confidence in the facts opposed to the general law, so long recognised, that the lesion of a cerebral hemisphere induces functional perversions in the side opposed to the diseased hemisphere.

Not unfrequently paralysis is confined to

one arm or one leg. An attempt to explain this phenomenon has been made by Foville, Pinel, and Grandchamp, who say that the striated bodies preside over the movements of the lower extremities, and the thalami optici over the thoracic extremities. Though M. Rostan believes in the existence of particular portions, destined to rule over certain limbs, he considers those assertions to be as yet premature.

Paraplegia may be complete or incomplete, and affect the lower extremities in succession or simultaneously. It most commonly depends on an alteration of the spinal marrow. Though primarily only partial, it eventually becomes general, owing to the minor degree of isolation of the nervous fasciculi of the spinal cord.

Crucial paralysis depends on alterations in various points of the cerebral hemispheres.

The palsy of the organs of the senses is with difficulty referred to any organic lesion that is always identical in its seat. In palsy of the tongue, it is necessary to form a distinction that may reconcile certain facts in appearance contradictory. Palsy of the tongue is frequently suspected, when in fact there is only annihilation of the memory of words: or the inverse may be the case, and the movements of the tongue be only perverted, without the memory having suffered in any particular. Now, it is this distinction that may reconcile the opinion advanced by M. Bouilland, who has placed the memory of words in the anterior lobes of the brain—and the facts stated by M. Foville, who has ascertained the existence of an alteration in cornu ammonis in individuals that stammer.

Oesophageal paralysis is somewhat rare, and the seat of nervous alteration on which it depends, has not been yet well determined.

It has been stated that the close study of the progress of the phenomena of paralysis, is a powerful aid in the diagnosis of affections of the nervous centres. Thus, in cerebral hemorrhage, the paralytic attack is sudden; in softening it is progressive, and is always preceded by particular signs to be hereafter detailed. The increasing progress of paralysis, shews the existence of softening or profound organic alteration of the brain; while its gradual decrease announces a cerebral congestion or a hemorrhage that has reached a certain point.

Sometimes paralysis is permanent after sanguineous effusions into the nervous centres, in which case, there has been a forcible laceration of the encephaloid mass, to some extent.

All the preceding facts and propositions have been contested: palsies with alteration of the nervous masses, and alterations of those masses without palsy, have been quoted. These facts, at best insufficient and incomplete, may at most lead the logical physician to conclude, that in the nervous centres, as in other organs of the body, there exist, in some

exceptional cases, certain latent affections, and that the means of anatomical investigation yet remain to be perfected. In the palsies produced by electricity, lead, mercury, &c., the nervous pulp appears to have undergone no change; but M. Rostan maintains that it is impossible for the physiologist and physician in these cases to do otherwise than credit the existence of an organic change in that substance—a change that very possibly will be made clear to us by better directed researches.

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The London Medical

AND

Surgical Journal.

Saturday, May 16th, 1835.

EDICTS OF MEDICAL CORPORATIONS —THEIR INJUSTICE AND ABSURDITY.

EACH new *curriculum* is a source of misery to somebody—to teachers whose audiences it diminishes, to students whose anxieties it protracts, or to parents whose purses it drains; and all this is, and will be, without any commensurate improvement in the qualification of practitioners. As long as the *certificate system* endures, lecturers will be exasperated, pupils tormented, and parents incommoded, to no good effect. When will the thick-witted potentates who rule the medical world be brought to comprehend that paper is not knowledge? When will they be convinced that a candidate might come before a board of examination clothed with certificates instead of a coat and small-clothes, and depart as great a lout as he came?

Under the present system there is no encouragement for talent among teachers, none for diligence among pupils. The lecturer may deliver the best or the worst discourses that ever proceeded from the mouth of man—it is quite immaterial which, so that they be delivered at the right time and place, and under the right auspices: the student, on the other hand, has only to provide himself with plenty of *stationery*—few quires of paper with the right

stamp upon it; as for the examination, it is a mere morning's amusement for a young gentleman endowed with a moderate share of *non-chalance*, who has been about the schools for several seasons, and learned his catechism from a grinder. It is true that this formidable process does occasionally frighten a nervous youth out of his senses; but does it ever demonstrate that the candidate understands his profession? Never. It sometimes sufficiently evinces that he does not; and herein lies its sole utility.

A *viva voce* examination before a board never can be a satisfactory test of practical knowledge; a man may know Cullen's Nosology by heart, or be able to repeat Mason Good's Practice of Physic verbatim from one end to the other, and yet be utterly incompetent to form the diagnosis, or conduct the treatment, of the simplest case at the bed-side of the patient.

Let the framers of regulations be assured that the public will not be deluded much longer with such a system of humbug.

It will occur to some of the more sagacious laics, that a student with strong sense in his head, books at his hand, experienced friends to advise him, dissecting rooms open to him, and a world of disease around him, may be illuminated with a few broad gleams of medical knowledge, though dwelling far from any *recognized* school; they will demand in his behalf a fair examination, and, if he can pass it, they will not be disposed to confide at all less in this outlaw of medical science than in the favoured disciple of a recognized school, however well supplied with certificates, which testify that he has sat out a certain number of prelections, but which by no means testify that the discourses were worth the hearing, or that the *alumnus* was not asleep while they were delivered.

In short, the said sagacious laics, in other words, "the intelligent portion of

the public," will declare peremptorily, that if a man possess a sufficient knowledge of his profession, they do not care one straw how or where he got it, and that he has an unquestionable right to exercise his abilities for the good of the community; all which, being mere matter of common sense and plain justice, must inevitably come at last to be generally admitted and acted upon, though all the corporations on earth should oppose it to the death. The fact is, every subject relating to the business of the world, admits of being reduced to the principles of common sense; and the great tendency of social improvement is to elicit these principles from the obscurity in which prejudice, false reasoning, and self-interest have involved them. The common sense of mankind will, some day or other, begin to bear advantageously on medical politics, and several complex questions will then be reduced to very simple conditions.

In reiterating what we have often said before, that a full, fair, and *practical* examination on every branch of medicine ought to be the sole test of qualification, we shall be met by the old cant about the difficulty of passing such an examination, and the consequent paucity of legally qualified practitioners. Now, what does the first part of this objection amount to but a full recognition of the defects of the present system. We are told that to make the candidate dissect and demonstrate, instead of answering a few silly questions, would try him too severely; yet this candidate is the individual to whose practical knowledge of anatomy the safety of hundreds is to be entrusted! We are told that to take him to an hospital, and see whether he knows one disease from another, and how to prescribe for patients, would be an impassable ordeal; yet this is the man on whose judgment the question of life or death is daily to depend! With regard to the insufficient supply of practitioners, shall we call the the objection ridiculous merely, or abso-

lutely insane, when it is notorious that the supply of practitioners is at present so superabundant that the doctors bid fair to fulfil literally the destiny of man—"to replenish the earth and subdue it;" for, in a short time they are like to have an overwhelming majority over all the rest of mankind!

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ODD MEDICAL QUESTIONS.

THE following are a few of the questions proposed at the commencement of the 16th century by the Parisian faculty, to the candidates of the different concours. They afford a ludicrous insight into the objects of medical inquiry in those days.

An semel in mense inebriari salutare? An paralyticis vinum et themæ? An verminosis affectibus amara potius quam dulcia? An vesicæ calculo laborantes secare liceat? An ex coitu cum menstruata fœtus nascatur elephantiacus? An in pleuritide, ut insolens est, vini appetitus, sic illius usus concedendus? An philtis amor conciliari posse? *Conclusio posse!* An vita humana physicis remediis ad millesimum annum possit prorogari?

Among other questions proposed in 1617, to the celebrated Riverius was the gallant one:—An mulieres rationi animi et corporis sint viris perfectiores?—the simple one, An et quomodo cucurbitia trahant? and the modest one, An cum claudicante, quam non claudicante muliere, major sit voluptas? To which Riverius—whether from subtle reasonings or from facts, the deponent saith not—answered "Major est viro voluptas."

These that follow are more rational and practical, e. g.—An lues venerea ab immoderato inter sanos amplexa suscitari possit? An eodem sit materia sudoris et urinæ? An hectius lac et balneum? An ophthalmiæ vinum? An phthisicis lignum sanctum? An scorbutus ellerboro? An pregnantibus et pecantibus absurda sint concedenda?

The physio-chemical question:—An metalla semen habeant et inter se possint invicem transmutari? was actually answered by Deidier in the affirmative.—(From a Memoir on the Origin of Medicine in the last number of the *Revue Medicale*, in which the author labours hard to establish, and concludes by asserting, the truisim "that medicine originated from God").

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Spontaneous Obliteration of the Aorta.

M. LOUIS lately exhibited to the Académie de Médecine a preparation of a complete obliteration of the aorta a little above its bifurcation; as also of both primitive iliacs. These changes had occurred in a woman 45 years of age.

MEDICAL QUACKERY.

"Such *laws* we have, and yet, tho' strange,
'tis true,
We have as base, abandon'd *doctors* too."

To the Editor of the London Medical and Surgical Journal.

SIR—As you have ever proved yourself an enemy to quackery, whether in or out of the profession, whether its practiser has nothing but his ignorance and impudence to rely on, or whether he can add half a dozen important letters at the end of his name—letters which only shew the greater degradation of the man, "fallen from so high a state"—may I presume on your pages, by offering a few remarks on medical quackery in general. Unfortunately for the profession, the laws which regulate it are formed so flimsily, and are administered so inefficiently, that almost any one may break through them with impunity; men totally uneducated, or worse, with just enough knowledge to do mischief, establish themselves beneath the quibbles of the Apothecaries' Act, and practise medicine and surgery, to the great injury of the educated medical practitioner; he may have spent his life in the acquirement of knowledge, at much pecuniary expense, and much self-denial; he may have taken the diplomas of the different corporate bodies, and taken them with honour; and yet, a man who has saved himself all this trouble and expense may have the same privileges, the same chance of success; then what do the diplomas of the corporate bodies benefit their possessor? Truly it is said they are necessary; but who shall deny the existence of unlicensed practitioners, who laugh to scorn the powerless threats of the *qualified* and injured? Shall I be told the diplomas give their possessor respectability in the eyes of the community, and that they enable him by that means to be more successful in life?—shall I be told this, when facts stare me in the face to contradict it? Do I not see advertisements in the journals of every passing day of the week, that gives this assertion the lie? Do I not see men flourishing in practice, patronized by the aristocracy, and publishing popular works upon the most important branches of the profession, without the possession of a single diploma, or even a knowledge of the anatomical structure of the part they profess to treat when diseased—as has been proved, and in your journal, within the twelvemonth? and yet will these worthies store their books of 400 quarto pages with histories of cases, wonderful cases, and no less wonderful cures!—cures that the credulous public take for gospel truth. That public should remember the words of the great Lord Grizzle, in Tom Thumb:—

"Cases! why, Public, 'tis all flummery;
They made the cases first, and then they
cured them."

The apparently cynical expression of the great Dr. Johnson, with regard to the success of quackery, has more truth in it than at first sight would appear. Does not the success of such mountebanks as I have been describing prove its correctness? Does not the immense sale of quack medicines—medicines bearing his Majesty's licence, and made patent, prove that the remark was just? Surely it does. It proves two things more—the little regard the government of the country has for science, and its shameless sacrifice of that science on the altar of mammon! Is this an overdrawn picture of the unjust laws that regulate our profession? But let us inquire how the diplomas of the corporate bodies benefit their possessor; it is known to even the merest tyro in the science of medicine, that there are numbers of the most talented, the most industrious practitioners, with a dreary prospect before them; their talent cannot save them from poverty, and their industry scarcely finds them wherewithal to subsist on; and yet these men were told that the possession of the diploma would lead them to respectability and emolument; they struggled, they studied, spent their youth in the attainment of knowledge; and for what? to see some ignorant, self-sufficient, unlicensed individual bearing away in triumph the emolument they had struggled for, the same for which they had panted, and which, were our laws better constituted, would have been theirs. Such, Sir, are some of the few evils of the present state of medical jurisprudence. Let me look now at another evil in the ethics of the profession. Are there no laws of etiquette existing, by which a regularly installed practitioner should be excluded from the profession when he becomes a disgrace to it? Shall the voice of censure be raised against the ignorant unlicensed, whilst we pass over in silence the quackery of the *legally qualified*? Shall we see the purity of our profession violated, and by those who should be its guardians and ornaments, and not condemn them? And yet, how shamelessly do the *great* amongst us, as well as the small, forget that "high moral character" which they tell us is necessary to be possessed by every practitioner in physic! Do not such know, that however much they may mislead the public by their catch-penny books, that they cannot deceive the profession? Do they think there are no eyes on them that pierce through the flimsy veil of hypocrisy with which they foolishly endeavour to disguise their intentions? They are about as wise as the ostrich, when she buries her head in the sand and thinks herself safe from her pursuers.

There are men, Sir, in the world, who would sacrifice "reputation" and every honourable feeling upon the shrine of ava-

rise; in our profession, unfortunately, as well as in others, such men are to be found. There ought, Sir, to be something in a profession of such respectability as the medical—a something that soared above mere gain; there ought to be a feeling of shame at an unworthy action—there ought to be a love of the profession for its sake alone; and a respect for themselves would lead them to respect their fellows, and to feel that any degradation of the honour of the profession would also degrade them as members of it. But let me ask if men can have any regard for it, who profess to cure diseases that are known to be incurable—who puff themselves off in newspapers in paid-for paragraphs—who publish books of cases and cures which never occurred, and who would endeavour to mislead the public on the strength of their names being registered in the books of a learned profession?

There can be but one answer, and that must condemn them. In the law, if an attorney has committed himself, he can be struck off the rolls: in the church, if a clergyman is convicted of a misdemeanour that is likely to bring the Church into contempt, he can be deprived of his living—why is there no law in force with regard to such things in our profession? Verily, it shews little wisdom in our legislators: and yet, Sir, there are men hardy enough to throw down the gauntlet in defence of such a system as now exists; they will condemn, in unmeasured terms, the practice of quackery by men holding no diploma; they will pour the vials of their wrath on the heads of those who are “fighting the good fight”—who have denounced the system of favouritism, money influence, and family patronage, in raising men of mean talents to important situations. What wonderful consistency do these anti-reformers shew—how profound their thinking! they condemn some of the effects, and yet will they uphold the cause of bad legislation. Let them look nearer to themselves—let them look to members of the Colleges of Medicine and Surgery in Great Britain generally—and then let me ask them, in the words of a great medical reformer, “What is the reason that great names do not always accompany great talents, or why great talents do not always accompany great names?” I will leave them to answer this, and will shortly send you a few remarks on the hospitals of the metropolis. Yours, very truly,

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J. F. C.

A FEW REMARKS ON PURGATIVE MEDICINES.

“Nemo solus sapit,
Feliciter is sapit, qui periculo alieno sapit.”

To the Editor of the London Medical and Surgical Journal.

Sir—There are no medicines in the *Materia Medica* which demand so much attention

from the practitioner—none of so much benefit in disease—none in which such power is possessed over the human body, as purgatives. The subject is one which engaged the attention of the older physicians, and even later writers; but it is only within the last thirty years that it has been taken up, thoroughly investigated, and proved to be one of the most valuable additions to modern medicine, both as regards its simplicity and effective action. That proper attention was not given to the subject by the older writers, may be seen from their works; and modern writers may equally be charged with the same culpable neglect of such simple and effective remedies. This may be accounted for by that natural love of former opinions, and confiding too implicitly in them. Another circumstance is, that practitioners are so apt to be led away by subtle and dangerous theories broached by men, that seem so pleasing to the imagination, so simple in their details, but which are founded on false and delusive principles. If we wish to advance the science of medicine, we must look to nature, observe the laws which regulate its action, and then, by comparison of the healthy and diseased state, we shall by experience know how to regulate our treatment of disease. It is thus by comparison, and the accumulation of facts, that we can arrive at conclusions, as praiseworthy of our industry as they are of importance to the profession. Medicine is a science of facts, orderly and well arranged; no theory is necessary to assist us in any practical point. We must leave theory to the elegant and inductive reasoner—leave him to range in that speculative field of medical philosophy which has employed the powerful intellects of the most cultivated men for ages; and it still remains as open and as free for the mind of man to range as formerly.

Dr. Paris remarks, in his able work, that purgative medicines may act in three ways on the alimentary canal.

1st. By stimulating the muscular fibres of the intestines, whence their peristaltic motion is augmented, and the contents of the bowels more quickly and completely discharged.

2nd. By stimulating the exhalant vessels terminating in the inner coat of the intestines, and the mouths of the excretory ducts of the mucous glands; by which an increased flow of serous fluids takes place from the former, and a more copious discharge of mucus from the latter, the effect of which is to render the faecal matter thinner and more abundant.

3rd. By stimulating the neighbouring viscera, as the liver and pancreas, so as to produce a more copious flow of their secretions into the intestines.

These divisions appear in practice to be extremely judicious, and gives the practitioner a practical and scientific view of his subject. The first division, which increases the peristaltic action of the intestines, is of

the greatest importance in many forms of fever; for here the peristaltic action is diminished, and the necessity for their exhibition will be apparent. For the investigation of this interesting fact to its utmost extent, we are indebted to Dr. Hamilton of Edinburgh. It was known and generally adopted before this, but not in the free and extended manner of Dr. Hamilton. In typhus fever purgatives must be confessed to be of the greatest importance by those who have seen the disease, tried the remedy, and witnessed the good effects. Dr. Hamilton mentions many cases of this kind, and his favourable account has tended much to increase the practice. I have seen several cases in which continued purging was kept up for a length of time, with complete success. Jalop and calomel, with senna, manna, &c., were the purgatives employed. There are several cases related in the *Lancet* of last week, which are additional testimony in favour of their exhibition in typhus fever.

The second division presents us with a class of medicines which produce a discharge of serous fluids from the exhalents. They are extremely useful in inflammatory fever, dropsy, and other diseases of this kind; saline purgatives, and many vegetable substances, come under this head,—as elaterium.

The third mode of operation is to increase the biliary and pancreatic secretion. This can be done by mercurial purgatives. The importance of this is seen in chronic disease of the liver, and of the mucous coat of the intestines.

But it is not in one or two diseases that purgatives are useful; there are some of course in which a more favourable impression is exerted. In *CHOREA SANCTI VITI*, we see, after all other medicines have been exhausted in vain to quell the force of the disease, or even to relieve the dreadful spasms and nervousness of the patient, purgatives, after a long continuance, reduce the disease, improve and strengthen the constitution of the patient. This was remarkably seen in a case at the Charing Cross Hospital; tonics and other medicines only relieved the disease, but a long and persevering continuance of purgatives, to the satisfaction of many, removed the disease; this was an extremely violent case—you could not speak or approach the patient without the symptoms being violently increased. In many forms of dyspepsia, where the biliary and pancreatic secretions are deficient, we have only to exhibit our mercurial purgatives, followed up by other adjuncts, unnecessary to mention, and we shall in the majority of cases find the disease decline by their exhibition.

There are several other diseases in which purgatives seem to be of the greatest consequence, not only from their powerful and beneficial action, but from the nature of the malady. Mania, a name so painful to the feelings of all, where reason is perverted by

its overpowering influence, and the faculties of man are laid dormant; it must be obvious to all that it deserves our paramount attention and consideration. There is no disease which has baffled the science and skill of the physician so much as mania; none in which so many devices, so many plans of practice, have been proposed, but without avail; therefore I say no disease demands so much the skill, the judgment, and experience of the practitioner as this. To recover man from a state resembling more the brute creation, to his own reason and judgment, must be the noblest of all human endeavours, and the greatest of all human desires. That mania depends upon different exciting causes must be apparent; as from disease, disordered functions, excitement of the moral feelings, &c. But it is not my intention to enter into details, but merely mention particular cases in which purgatives are of essential benefit. We often see cases of mania occur without any apparent cause, without any of those premonitory signs which are seen in others. To what can this be attributed? what conjecture can we offer? That some irritation of the secretory system is the prominent cause that presents itself; and this will be found not without foundation; for if inquiry is made, the secretions will be found unnatural. Even in some confirmed cases this is generally the case; and it is to this only that we should direct our attention. I do not here speak of those confirmed cases in which disease of the brain or its membranes are supposed to be connected with the disease, but from the sudden and unaccountable occurrence of mania, in persons of supposed health, strength, and sound intellect. I well remember the case of a young lady, whose bowels were naturally costive, being suddenly seized with mania; that some severe irritation of the secretory system was the exciting cause, became afterwards apparent. Her menstrual courses suddenly ceased, her bowels were confined; bleeding was practised, calomel was given, and several other medicines, but without in the slightest degree relieving the bowels, and in fact every expedient was tried to open them; and it was not until croton oil was exhibited (it was about this time, 1830, brought a good deal into notice), two drops in a dose, that the bowels were opened; and another dose having been given, free purging moved, which was kept up for about three days, when the patient's faculties returned to their natural state. It has been found by a course of purgatives in mania, and in many of its forms, as melancholy mania, partial mania, &c., that the greatest benefit is derivable from their use. There appears to be so great a sympathy existing between the alimentary canal and the head, that we cannot wonder at the many cases of temporary mania which occur, and which, by the continued judicious employment of purgatives, will generally prove of essential benefit to the patient.

The subject of the sympathetic connexion which exists between the alimentary canal and head would be an extremely interesting investigation, and would much forward our views with regard to the treatment of insanity.

In all chronic diseases purgatives may be used with considerable success—but they must be continued in many cases for a long period, and require the greatest attention from the practitioner..

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PARISH JOBBING.

To the Editor of the London Medical and Surgical Journal.

SIR—I was somewhat surprised on perusing a letter in your journal of last week, signed Londinensis, respecting the persecuting treatment to which I was subjected last September, at the election of surgeon to one of the districts of the large and opulent parish of Saint Pancras. I had entirely banished such contemptible proceedings from my memory, and thought every one else had buried them in the waters of oblivion; for if I had wished to have drawn public attention to such conduct, I should have availed myself of the public press at that time. However, your correspondent, evidently under the idea of rendering justice to myself, has done so; in consequence of which I feel myself called upon to verify as far as I can with propriety, the statement he has put forth.

The part which concerns my late friend and master, Mr. E. W. Wright, is correct in every particular; and I trust you will permit me to pay a just tribute to his memory. He had a few pupils, who with myself agree that he was ever ready to impart what medical and surgical knowledge he possessed (and sound and practical it was) to us, his treatment being more as a father to his sons than teacher to his pupils; not one of us would regret passing through another apprenticeship with such a man; but enough—he died regretted by his friends, beloved by the poor, and respected by all.

It is equally true that he met with unwarrantable opposition more than once, by a man who at that time ought not to have been allowed to enter into competition with him, not being qualified at the time.

It is also true respecting the treatment to myself, after his decease, and that, owing to party feeling, I lost the election; that I never in any shape or way received the least expression of thanks for my services all the time; but what could I expect from a mixed set of men, the majority of whom had no pretensions to respectability, composed of eating-house keepers, oil-shop men, green-grocers, butchers, coal-shed keepers, retail beer-shop keepers, bankrupts, and insolvents, and a few gentlemen, the latter of

whom voted in my favour, and for which I respectfully thank them.

I was likewise the medical officer attached to the parochial Cholera Hospital, and twice nearly fell a sacrifice to its arduous and constant duties—having sometimes as many as sixteen patients in the collapsed state to attend to at once; to report their cases hourly, night and day, and the treatment adopted; to dispense all the requisite medicines; to keep a diary of all cases admitted; and frequently I have not seen the inside of a bed for a week successively, and no assistance except the advice of my kind friend Dr. Roots, to whom I am chiefly indebted for my knowledge of disease, and for whose instruction and advice I feel grateful, and am proud to acknowledge it. For what did I do so? to be turned out of an appointment that I justly merited.

Mr. Editor, I fear I have overstepped the bounds of prudence, in talking too much of self; but, as Mr. G. Burnett justly observes, although “the last person a man should suffer to speak of him, is himself; for whether his words be few or many, it is likely he will be blamed for having said both too little and too much, still there are occasions, and the present appears to be one, in which such a risk should be encountered.”

There is one point to which I wish to draw your attention. The directors made it a sine qua non that the successful candidate must reside in the district. Now, a period of seven months has elapsed since the election, and Mr. Delisser has not come to reside in the parish, although he had his name painted on the door of No. 63, Judd Street; and there your correspondent is in error in stating that he had a surgery in the parish; for, would you credit it?—I went to ascertain the correctness of each item, when I found Mr. Delisser's name had vanished, the door fresh painted, and Mr. Murphy's mother residing there. Save the mark! Murphy! “Something rotten in the state of Denmark.” So Mr. Delisser, the parish surgeon, has neither house or surgery in the parish—is not a parishioner. Can any reasonable man credit it, or honest men allow such barefaced conduct to pass unnoticed; to even throw the gauntlet in their teeth, and have his own address printed on the parish orders, condemning himself, and not one out of one hundred and twenty dare enter the lists against him! Oh ye vestrymen of Saint Pancras, I am ashamed of you.

Your correspondent has been kind enough to pass an encomium on my humble professional abilities, for which I leave those of my own acquaintance who know most of me, to decide whether I deserve or not. Perhaps I may be allowed to say, if I cannot uphold the respectability of the profession to which I have the honour to belong, I will endeavour not to disgrace it; for as we daily see the profession endeavouring to bring themselves into public contempt,

must it not necessarily follow that the community at large will take advantage thereof?

Yours very truly,

HENRY BIRD.

15, Southampton Terrace, Kentish Town.

May 11th, 1835.

Hospital Reports.

WESTMINSTER HOSPITAL.

Lupus.

SOPHIA BORNHOYD, aged 21, was admitted, March 18th, into Percy Ward, under the care of Mr. W. B. Lynn; having disease of the lips and face, of two years' duration. She has of late lived at home with her parents, her father being coachman to a private gentleman. She is of a pale, delicate, leucophlegmatic habit, and possesses many of the marks of the strumous diathesis, which, however, does not appear to have ever developed itself in any of its ordinary forms of actual disease; she says that she never has had any inflamed or enlarged glands, nor do any cicatrices appear, to contradict the statement. Neither does it appear that she has ever laboured under any constitutional disease, as syphilis; and her general health appears to have been tolerably good. She is, however, the subject of amenorrhœa emansionis, the catamenia only having been noticed five or six times. There is also leucorrhœa generally present.

She states that six years ago, a hard roundish tumour, about as big as a pea, appeared in the inner angle of each eye, for which she was an out-patient at the St. George's Infirmary, Grosvenor-square, where they were extirpated by Mr. Heaviside. The cicatrices are still very distinct. She has a very troublesome degree of deafness, under which she has laboured about two years. It is about the same period of time that the disease for which she has been now admitted into the hospital first appeared, in the shape of fissures of the epithelium covering the prolabium of both lips, but especially the under one. This has gone on progressively increasing, until it has formed a hardish tumour involving both lips at their left commissure, extending inwards upon the mucous membrane, and outwards upon the skin. The surface of this tumour is ulcerated, and secretes an ichorous discharge, frequently also bleeding, and that especially when irritated. It is attended with slight pain, which is aggravated by being touched; around the margins of the sore, thin crusts occasionally form. There is likewise a tubercular eruption on the face, consisting of partially distributed largish flat papular-shaped tubercles of a reddish livid hue. A rather large spot has within a few weeks appeared on the columna nasi, which appears disposed to spread and ulcerate. During the course of the progress of this

affection, she has been several times a patient of Dr. Roe's at the old hospital, and on one occasion was admitted into the house, without, however, the progress of the disease being checked. Since her admission on the present occasion, Mr. Lynn has only directed a few aperient remedies, which he hoped might have been sufficient.

25th. Since last report she has been transferred to the care of Dr. Roe, and removed to Tillard Ward; and Dr. Barham, the gentleman who now fills, with credit to himself and advantage to the institution, the office of clinical assistant, and under whose more immediate care the patient falls, it appears has at once recognised the case as a distinct specimen of lupus. She is at present suffering under a slight diarrhœa, for which she is taking a chalk mixture, with aromatic confection.

28th. The diarrhœa has been relieved, and the following lotion has been directed to be applied to the ulcerated surface.

Rx. Iodini ℥ij;
Potassæ hydriodatis, 3 ij;
Aquæ 3 j.

M. Ft. lotio.

31st. The iodine lotion has been discontinued, as it causes considerable pain. The affected part of the lip is much the same, but if any thing rather more tumid.

April 2nd. Much the same; the following have been prescribed:

Rx. Argenti nitratis, gr. xvj;
Aquæ destillatæ, 3 viij.

M. Ft. lotio.

Rx. Iodini gr. x, in balneum inficiatur, et postea ægra estimmergenda.

April 8th. The pain, tumefaction, and ulceration of the lips are all more extensive at present than they were at the last report, and there appears to be a more irritable condition of the parts affected. The spot on the columna nasi has also extended. Persistat.

14th. Remains much the same; she has been directed to omit the lotion and bath last prescribed, and merely to employ the oxide of zinc as a dry application.

18th. The disease appears to be somewhat increased, and there is more bleeding and glairy secretion from the ulcerated surface. She has had a little nausea, and has been ordered for it as follows.

Rx. Ext. colcynt com. gr. x.
Ft. pil ij, h. s. s.;
Rx. Acid hydrocyanic gtt. xvj;
Aquæ, 3 viij.

M. Ft. Mist.

Capt. cochl. ij o. 4ta hora.

22nd. Much as before; she has been ordered as follows.

Rx. Decocti sarsaparillæ, Oj;
quotidie sumend.

25th. Some amendment is perceptible since she has been taking the sarsaparilla, which she continues; there is an evident diminution of both the tumefaction and pain.

30th. The swelling daily becomes less, and the surface less irritable, as indicated by its gradually putting on a more healthy character, and by the cessation of the bleeding. She leaves the hospital on Tuesday next, (the taking-in-day) as change of air is thought likely to be of service to her. She continues the use of the sarsaparilla.

Retention of Urine from extraordinary Chronic Enlargement of the Prostate, with extensive Disease of the Entire Urinary System.

MATTHEW INIS, aged 70, was admitted April 18th into Northumberland Ward, under the care of Mr. W. B. Lynn, suffering under retention of urine. On the day of his admission Mr. Lynn passed a catheter, after some trouble, which afforded him great relief by evacuating the bladder; but the next morning the accumulation of urine was so great as to give him great distress, and Mr. Lynn, after many trials, could not succeed in passing the catheter. After having recourse to various expedients, Mr. Lynn regarded the puncture of the bladder as the only resource; and proceeded to do it from the rectum. He did not persevere in this, however, from the immense size of the prostatic tumour, which would have rendered such an operation worse than useless. Recourse was now again had to the catheter, various modifications of which were tried; but from the existence of false passages in the urethra, and the great barrier at the neck of the bladder, these were for a long while ineffectual. Mr. White, who arrived at this juncture, was requested to assist, but for a long time his endeavours were no more successful. At last, however, in a happy moment, and by a dexterous manœuvre, he succeeded in introducing the instrument, and in this way a large quantity of turbid offensive urine was evacuated from the bladder. The instrument subsequently required to be introduced twice daily, and the same description of urine was always obtained, mixed occasionally with ropy mucus.

The progress of the case, we are sorry to say, we cannot record minutely; but the system became gradually affected by the local disturbance; his tongue became furred and dry; his countenance anxious; appetite bad; pulse feeble; and he fell into a low semi-comatose state, from which he was only with difficulty roused, so as to enable any answers to be obtained from him. In this way, gradually sinking, he died on the 29th. He was bled soon after his admission, which gave rise to a rather severe attack of erysipelas of the arm, which threatened to extend to the trunk, but its progress was checked effectually by the plan of treatment which Mr. Snowdon, the house-surgeon, adopted. The inflammation was relieved by the poppy fomentation, and its further extension prevented by the application of nitrate of silver around the limb, at

the shoulder and wrist, so as to completely encircle the limb in both situations.

Inspection of the Body 30 hours after Death:

The head was not examined.

In the thorax there were found slight pleuritic adhesions, which being readily torn through, were evidently of recent formation.

There was very extensive concentric hypertrophy of the left ventricle of the heart, as shewn by making a transverse division of the organ, which exhibited a scarcely apparent cavity, surrounded by its firm fleshy parietes, of at least an inch and a half in thickness. The right side of the heart was quite unimplicated in the hypertrophy, and its ventricular cavity was seen extended, in the shape of a narrow interstice, over the hypertrophied substance of the left. In the right ventricle, and extending into the sinus of the aorta, was found a large coagulum, which almost filled its cavity, but had no adhesions to its lining membrane. It possessed considerable firmness, had a smooth polished surface, and was of a semi-transparent yellowish colour. On cutting into it a sero-albuminous fluid of the same colour escaped. None of the valvular apparatus of the organ was affected.

The cavity of the aorta, more particularly in the situation of its transverse arch, was considerably dilated, and its lining membrane had undergone the osseous transformation on its attached surface.

The patches and granules of bone were of various sizes and shapes, occupying almost the entire surface; the lining membrane in some places appeared to have been absorbed, thus allowing their margins to project into the cavity, and giving to the touch a feeling resembling that of a rasp.

Abdomen.—The liver was somewhat congested, but in other respects healthy.

With one exception, the intestinal canal, which, however, was not minutely examined, presented nothing abnormal. There existed a small inguinal hernial sac on the right side, which most probably had contained a portion of the sigmoid flexure of the colon, which was found lying loose in the pelvic cavity. This intestine, at least, had evidently been strangulated either in this or some other way, for the extent of two or three inches; it was of a deep livid mahogany hue. Below this, the seat of stricture, it was in a highly contracted state, but above, was very much dilated, from an accumulation of flatus, so that its parietes were semi-transparent.

The mucous membrane of the rectum was found highly congested, and presented one or two spots of ecchymosis.

Urinary Organs.—The kidneys were extensively diseased: we will describe the appearances presented by the right. It was surrounded by a peculiar grey, soft adipose tissue, and adhered very slightly to its investing capsule. It was of a somewhat larger

size than natural, a great portion of its anterior surface was in a state of complete ramolissement, with intermediate points of indurated structure. In several parts the tissue had become absorbed from the ulcerative process; in others there was excessive hyperæmia; in others, again, ecchymosed spots of a livid hue, or slight fungous granulations. Although, doubtless, the changes which the organ had undergone are all referable to chronic inflammation, yet at first sight it might have suggested the idea of medullary disease. There were also one or two serous cysts, about as large as a pea. The same appearances presented themselves at the summit of the organ, but much more partially on its posterior surface. On making a section of the kidney, the disease, so apparent on its surface, was found to have involved very generally the secreting portion of its structure, and to a less extent the tubular. The calyces, infundibular, and pelvic cavities, were found considerably dilated inwards, and contained a quantity of grey diffuent matter, of a highly urinous, and, perhaps, ammoniacal smell, consisting, doubtless, of a mixture of urine and mucus, and perhaps of some pus. The mucous membrane lining the general cavity of the kidney was somewhat thickened, and exhibited blood-vessels in its texture, in an extremely congested state, especially the veins, which might be almost esteemed varicose. It was not, however, ulcerated, unless a few linear fissures, which appeared in the pelvis, could be ascribed to that source. The left kidney was similarly diseased, but not to the same extent. In the substance of the tubular portion were found several opaque, whitish spots, which the dissector, Dr. Barham, regarded as consisting of tubercular matter.

The ureters were considerably dilated, from an accumulation of the same fluid as that found in the renal cavity; they likewise exhibited similar appearances of congestion, &c. as those described to have been met with in the tissue of the pelvis. Whilst in both the ureters, the most dilated portions were situate at their upper and lower extremities, they each presented a very remarkable constriction just above the point where they descend into the pelvis, so that they each represented a double cone, having their apices united at this point.

The bladder, being opened, was found to have undergone extreme hypertrophy of its muscular coat; its mucous coat was likewise highly thickened, and of a reddish yellow colour; it was also softer than natural. It was projected by the hypertrophied muscular fibres into the cavity of the viscus, in the shape of large thick rugous elevations. The coat of the bladder varied from a quarter to half an inch or even more in thickness. The openings of the ureters were of the usual size. Projecting into the cavity of the organ, and occupying all its lower por-

tion, was found the third lobe of the prostate gland, which had acquired an immense size, being about twice the ordinary size of the entire adult prostate, when not affected by disease. It had two openings into its substance, evidently of recent formation, and doubtless produced by the efforts to pass the catheter. The lateral portions of the organ were enlarged in proportion; the tissue composing them was of a yellowish white colour, and of a consistence somewhat firmer than that of the hard medullary parts of the base of the brain. The verumontarium was also enlarged. The bladder contained a portion of a similar fluid to that met with in the ureters, but the greater part of the vesical tumour was produced by the enlarged prostate gland and hypertrophied coats of the viscus. The urethra, in its membranous and bulbous portions, was considerably inflamed, and contained three false passages, two of which were of recent date, whilst the other appeared to be of long standing, and communicated with the cavity of an abscess situate in the perineum, which contained about an ounce of pus.

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MEDICAL REFORM ASSOCIATION.

To the Editor of the London Medical and Surgical Journal.

SIR—You will oblige the Medical Reform Association by the insertion of the following notice.

At a meeting of the Association, it was resolved—That the decision in regard to the prizes shall be postponed till the essays have been examined by a member of the British Parliament, who kindly promised to read them.

I have the honour to remain,

Sir,

Your obedient Servant,

JOHN EPPS, M.D.

Honorary Secretary to the Medical Reform Association.

89, Great Russell-street.

May 8th.

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Re-appearance of Malignant Cholera in London.

We have been informed by Dr. Kenny, of the Strand, that he attended a fatal case of blue cholera this week, in his immediate neighbourhood. The man had rice-coloured evacuations, violent cramps, low whispering voice, cold breath and tongue, with blueness of the extremities. He expired on the third day of his illness.

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CORRESPONDENTS.

Dr. Fletcher's Lectures.—We daily expect the receipt of Dr. Fletcher's valuable lectures; and we beg to assure our readers that their non-appearance is no fault of ours.

Erratum—Dr. Hooper's age was 63—not 56, as stated in our last.

THE

London Medical and Surgical Journal.

No. 173.

SATURDAY, MAY 23, 1835.

VOL. VII.

SELECT LECTURES,

FROM

M. BROUSSAIS'

Course of General Pathology and Therapeutics,
translated and revised

By JAMES MANBY GULLY, M.D.

LECTURE I.

IN a few months from this time, twenty years will have elapsed since Broussais published the first volume of his *Examen des Doctrines Medicales*. It was a forcible and ingenious method of at once shewing the weakness of preceding doctrines, and of making clear, by comparison with them, the strong position of his own, the broad physiological base on which it was founded. I say broad, for though the common cant of many who pretend to know his doctrines, is to decry them as narrow and exclusive in relation to the organs and functions of the body, I trust that those who will read the following lectures will find, as I have done, ample reason for rejecting an assertion so contrary to all that Broussais himself ever taught. And here, indeed, is one very influential motive with me in the translation and publication of the present course; myself convinced, from some considerable attention to the subject, of the strong vein of truth that runs through the doctrines in question; convinced also, that were they more intimately known to British readers, much error with regard to them would be dispelled, and much admiration of them elicited—I have not considered a system of pathology of twenty years' standing too old for an introduction to our language. To hear numbers who have never read a line uttered or penned by Broussais; who have never practised or seen put into practice his methods of cure; to hear such sneering at "the Broussain Theory," is sufficient to excite a degree of pity that would carry one through the philanthropic labour of transcribing huge tomes, did they even contain less interesting matter than these—of elucidating complex positions, did they even

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boast of less precision and clearness than those taken up by the learned pathologist.

One great peculiarity in the doctrines of Broussais, or as they are collectively called, the physiological doctrine is, that they contain no single material from the systems of antecedent writers. No one can accuse him of sending forth a *rifacimento* of what had gone before him. Search them through; neither the *animus* of Stahl, the *irritability* of Haller, the *error loci* of Boerhaave, the *spasm* of Hoffman and Cullen, the *sthenia* nor *asthenia* of Brown, can be traced. He thought for himself, he thought, careless of past names and reputations, he saw that all had been in the wrong track, and gathering wisdom from their wanderings, he struck out into the high road of physiological truth, and found that it was the direct path to pathological precision. It is because he revolutionized medicine, because he undertook a demonstration of it in a way so totally different from preceding authors, and yet so harmonious in all the parts of itself, and with all that is observed at the sick bed, that his physiological doctrine quickly took root, and speedily sprang up in France. And, perhaps the very same reason may account for the tardiness and even dislike with which it is received in this country, where Cullen's *First Lines* is still a text book both with corporate examiners and students.

However caused, it is certain that a profound ignorance of the *real* propositions maintained by the followers of the physiological medicine, still exists among us. Possibly the tangible and easy form of lectures may induce many to make themselves acquainted with the facts and reasonings on which it is based. To render this more probable, I shall refrain from giving the entire course on the pathology of all the diseases comprised in the seven categories at the conclusion of the first lecture, and confine myself to those parts of it which exhibit the prominent features of the author's peculiar medical tenets. I shall also refrain from commenting on the original (as I had at first intended to do) in order that no

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cloud, in the shape of notes, should obstruct the light that pervades the professor's enunciation of his reasonings.

J. M. GULLY.

11, Gerrard-street, Soho, May 18, 1835.

Irritation.

The living body is irritable and contractile in all its parts in various degrees—in the nerves, the muscles, the vessels, and the cellular tissue, which is the common bond of all the organs. This irritability is manifested either by a painful or an agreeable perception, or by a movement; but first of all by a movement, for no perception can take place without certain conditions of the nervous system—conditions that are not always present. Of this question I have fully treated in my *Physiologie appliquée à la Pathologie*.

Stimulated to a certain extent by fit agents, the body acts in a normal manner, is composed and decomposed, and lives equally and harmoniously. This is the most generalized idea of stimulation, which, however, differs from irritation. Should the body be stimulated beyond this extent, or by unfit agents, its functions are deranged and become anormal, the phenomena of composition and decomposition change and deviate—it becomes morbid. If it be denied that it is in consequence of having been too much, too little, or improperly stimulated, that the body becomes diseased, I will not dispute the point; I would merely remark, that, if a morbid condition of the body is present I am only aware of it by the presence of some irritation, of some stimulation different from that which obtains in the healthy state, and to which I give the name of *irritation*; or by some diminution of the normal and usual degree of stimulation. It will be asked, why are you unable to recognise it in any but this light? Because it is the movement alone that impinges on my senses. I care not by what route the morbid cause has arrived; the disease is an incontestable fact to my understanding, only by the augmentation, the diminution, or the anomaly of the stimulation. The augmentation is an irritation, the diminution a sub-excitation, the anomaly—but this we shall see further on. Thus irritation plus, irritation minus, or anormal irritation, furnish us with the diagnosis of disease, and guide us in its treatment. This irritation will inform us, in irritative disorders, what organ is primarily affected, what secondarily, and of the action of our remedies. Those who have seen or have treated such diseases, may remember that if the remedy has been beneficial, the patient has been less irritated—if hurtful, the contrary.

In what part does irritation appear? what are the tissues in which it is exhibited?

In the first place, we see it in mobile parts—parts not env
sub-
stances. The more

vessels a part contains, the more prominent is it there, particularly if the part be situated externally. But if it be out of sight—if the primum mobile of the phenomenon we observe be invisible, as is the case in internal disorders, how are we to recognise irritation? Certainly by the phenomena it usually produces when visible, and which are, as it were, its shadow. We shall therefore begin by examining irritation as it occurs externally, in order to our familiarization with its phenomena.

But before doing this, you will perhaps desire that I should say something of the fluids. I shall be glad to do so, the more because in these days they can by no means be passed over. No modification in the solids can take place without the fluids participating in it; and while the latter are continually being transformed into solids, it is on the connexions between the two that all the secretions, normal and anormal, and all the changes of the animal materiel are dependant; besides which, when the body is in a morbid condition the fluids also are altered. But let us inquire whether these alterations, whose existence is indubitable, furnish us with the means of ascertaining the nature of disease.

The fluids may be the vehicles of morbid causes. Virusses, at least those whose existence is beyond question, and which we know by plain deduction, as the small pox and vaccine virus, enter the body by the fluids. So long, however, as they are confined to the fluids, you have no signs of disease, and their mere presence in the fluids does not constitute a disease. They enter quite as freely into the body of one who suffers in no degree from them, as into that of another whose health is thereby deranged. Will any one be rash enough to assert that they have altered the fluids of an individual before the alteration of sensation and movement have given notice of such an effect? Are there not persons whom it is impossible to infect with small pox and cow-pox?

In examining other virusses, those for instance of typhoid affections produced by putrid miasms, can it be affirmed that the blood of those, who as yet feel no disorder from it, but who nevertheless are absorbing it by every inlet, is altered, when it differs, in no respect, from reputedly healthy blood? You every day see persons who absorb the most fetid gases, who exhale such by respiration, by eructations, by flatus downwards, and by the skin, to a degree that disgusts every one near to them; and who, notwithstanding, are not diseased. That they may become so, some disorder in the action of the solids is requisite, and of this irritation is the index; then, and then only can a disease be said to exist. The same applies to all infections.

Even in plethora, a state that has been more especially advanced for the purpose of renovating the doctrines of the humoral pa-

thology, the solids alone present themselves to our senses. In fact, how would you proceed to judge of a plethoric condition, by the complexion? There are persons with a higher complexion without plethora, than others with plethora; there are persons, from being highly coloured in a former plethora, are less so, or not at all, in a subsequent one, and vice versa. Draw blood from their vessels, still you see nothing that can certify to you; for there are individuals that have an exceedingly fibrinous blood without being plethoric; and there are others again, the inhabitants of hot climates for instance, whose blood is less fibrinous, at the same time that they are decidedly plethoric. Hence it is impossible to ascertain the existence of plethora by the fluids alone.

In short, I defy you to shew me a disease that can be attested by the alterations of the fluids. This alteration cannot be affirmed to exist until the solids point it out, notwithstanding that these very fluids are capable of conveying the causes of the disease. It is, however, argued that the fluids are so far the seat of disease, that a multitude of destructive causes by their means enter the body and produce no effect until after they have been absorbed; and experiments are quoted, particularly those of the cupping-glass and ligature, which prevent the effects of poison by obviating its absorption. But in the first place it is not always the case that poisons enter by absorption. Some extremely active substances, as certain gases, act in a manner which we are unable to explain, but so suddenly as to be incompatible with the tardy pace of absorption, and the transmission of which is referred to the route of the nerves alone. There are others that derange the health by a stimulation directed immediately to some surface of relation; others again that produce an afflux, a vesication, a rubefaction, a corrosion, a burn, for instance, without the introduction of any thing into the fluids. But granting that all these poisonous substances are introduced by means of the fluids, what we have advanced is in no way thereby shaken; a movement must still indicate their action, for there is no disease nor any species of death exempt from some cry of pain, some convulsion, partial it may be, of the solids; and the movement caused by the agent, whatever it be, is not manifested until that agent has commenced its action on the nervous system.

Again, I am told "you are afraid to administer bark in intermittent fever, lest it should irritate the stomach; but it does not cure the fever by acting on the stomach but by being absorbed." But what is the gist of this? if bark will irritate the stomach, of a man having gastritis with intermittent fever, after its absorption, am I on that account to be less careful not to administer it? This very forced necessity is a fact that

proves how essential it is to look to the state of the solids in the first place. We may be assured that medicine may be both studied and practised without reference to the fluids; for, if we only succeed in re-establishing the normal modus of stimulation, the fluids return of themselves to health; whereas, if we attempt to act on the fluids alone, we shall find it impossible, for, to affect them, the remedies must first impinge on the solids; and, should they do so too vehemently, instead of regulating, they only disorder the movements of them.

To resume; without denying the alteration of the fluids in disease, and assenting to the fact that the body was in the first instance fluid; without asserting that irritation is the *only* cause of disease—a thing that I have never uttered, nor any true physiologist advanced; without denying that a morbid cause may reside in the fluids without being in any way manifested; I maintain that irritation ought to be our guide in pathology; and that we shall find incessant occasion for it as a means of diagnosis, as the rule of therapeutics, and as the index of the changes that are continually taking place in diseases; it is the torch by whose light the physician ought to proceed. This is my profession of faith on the subject of irritation.

Let us now reduce to precision our ideas on this great phenomenon, whose utility to the physician I have pointed out. Two tissues introduce irritation to us; we *must* thus attach it; for, in itself, it is only an abstraction like the hypersthenia or asthenia of Brown. Some have said that our doctrine resembled his; but this is utterly erroneous. We proceed upon the facts discovered by Haller—facts that observation has rendered fruitful, but which Brown had his own peculiar way of viewing and estimating. He made an abstract idea of irritation, and confounded it with an excess of the powers, even of the general powers of the subject; he referred to excitement without caring for either fluids or solids, just as the partizans of the humoral doctrine referred to the fluids, without bestowing a thought on the solids, through the intermedium of which their medicines were to act on the fluids.

With us, therefore, irritation is not an abstract idea.

The tissues with which the idea of irritation is connected are, first, the nervous tissues, which are divided into three sections, the central nervous tissues (brain and spinal cord); the sensitive and motor nerves; the ganglionic nerves, or the nervous apparatus of the great sympathetic; secondly, the vascular tissues, also divided into several sections; the sanguineous vascular tissues, of which the heart is the centre; the lymphatic vascular tissues, again divisible into absorbent and ganglionic tissues; the secretory and excretory tissues; the areolar or serous tissues, or those for isolating the organs.

There are also erectile tissues, whose elements are the vascular, nervous, lymphatic, and sometimes the secretory.

In each of these tissues irritation may establish itself, and in an astonishing manner disappear and emerge, change locality, and give rise to a series of phenomena, with a more detailed idea of which I shall endeavour to present you. Thus, in the nerves, irritation gives rise to pain, convulsions, exaltation of the intellectual faculties, and by progression, to their abolition or anomaly. In the sanguineous apparatus, it produces congestion of blood, increased heat of the part, alterations of the fluids and solids. In the non-sanguineous as in the sanguineous tissues, it induces congestion, but not congestion of coloured blood; there is also increase of temperature, and a morbid condition in a smaller degree than in the purely sanguineous capillaries.

It must not be hence inferred that I consider every congestion to be necessarily produced by an irritation, or that an irritation necessarily produces a congestion. Congestion may be caused by any obstacle to the movement of the fluids; and whatever the cause be that retains them in a part, these fluids almost invariably irritate in a major or minor degree. Congestion may be the consequence of a defect of contractility, in which case the consequent irritation is less. It may come on in consequence of the predominance of physical over vital laws, as is observed at the close of diseases; as the patient sinks and the power of life diminishes, that of physics and chymistry rises superior, and the decomposition of the body commences with the active fulfilment of the laws of attraction and of the affinities. This congestion by gravity is also observed in dead bodies, where it is important to distinguish it from that arising from other causes.

Now that you have a summary idea of irritation, considered locally, you must learn that it is transmitted—that, commencing at one point, it passes to others. But if you do not like this mode of expressing the fact, you may say that on the access of an irritation in one point, another irritation comes on in some other. This is a primary fact which no one can contest. Let us look for a few more. The blood put in motion by irritation, particularly by that of the heart, may accumulate in different organs; and should these be inclined to retain it, secondary congestions are formed there. The fluids that have been altered by irritation may proceed to different organs and induce an irritation in them. This happens when the venous or lymphatic radicles absorb pus or any other irritating matter from a focus of decomposition, and convey it into the system; in this case the individual, instead of being infected by others, infects himself—an occurrence observed in various

instances. When there is an irritation, certain fluids are retained in the vessels, others are effused and remain in the areolar spaces: in these, tissues become organized, are decomposed, and sometimes cause disorganization of the solids, in consequence of the aberration of the vital influence thereon. Therein also a simultaneous alteration of the fluids and solids occurs, and formidable changes follow.

Thus you may remark that irritation is the *primum mobile* of numerous phenomena.

Let us now endeavour to bring these phenomena into some precise order, and more particularly approximate them to tissues; we will take those in which irritation should be most prominent. *I do not wish to confine it to any particular tissue*, for nature bears no part in exclusive assignments. But if it cannot be said to be confined exclusively to this or that tissue, we may very frequently affirm that it predominates in the sanguineous apparatus, in the centre of that apparatus, in the coats of the vessels, in the sanguineous capillaries, in those parts, in short, where there is an excess of red fluids. This, as you may conceive, is liable to produce inflammation.

Irritation may predominate in the areolar systems, which are not sanguiferous in the healthy state, but which then become so. A phlegmon is then the consequence.

It may predominate in the tissues that have another office than that of circulation, as in the various secretory organs. It is then necessary to determine whether sanguineous irritation is uppermost, or whether that of the secretory vessels themselves predominates. In these you will have other shades of irritation, to which a specific name may be given; long ago I proposed that of sub-inflammation. By some it has been adopted, by others rejected; even the majority of the physiological doctrinists have thought proper to apply the word inflammation to the irritations that exist without predominance of sanguineous capillaries. I am by no means convinced by what has been said on this point. In order to the classification of inflammatory diseases, and especially to their treatment, it is essential to be aware that there are irritations beneath the standard of true inflammation, inasmuch as the history of inflammation, properly so called, does not include that of the sub-inflammations; and if we look only for inflammation in these disorders, we shall assuredly commit errors. It therefore becomes necessary to admit a vascular irritation that is slightly or not at all sanguineous, that in ordinary circumstances is more fixed, more tenacious of its existence than inflammation itself, and that disorganizes a part in a manner peculiar to itself. It may be also moveable. A more intimate examination of the symp-

tomatology, the anatomical characters, and the treatment of these sub-inflammations, will suffice to shew the exact subdivisions that should be made in them—divisions that I have hitherto hinted at, only in a general way.

It is evident that irritation may predominate in the nervous apparatus, as a phenomenon of inflammation, and also in another manner; for you shall see cases of insanity, after which no inflammation can be found, but instead of it, an increased density and whiteness of the cerebral substance. Thus, irritation prominent in the nervous tissues may be exhibited, either in an inflammatory or sub-inflammatory form. The same obtains in extremely complex apparatus, in such as have functions that require the concurrence of a great number of organs. In them irritation is diversified, and in time and place it may be surprised in its different shades; and the degree of activity or stimulus that would render it sanguineous or of another kind, may be ascertained. A similar remark may be made of the nervous cords.

In the nervous extremities or the nervous twigs reduced to a capillary state, there are purely nervous irritations, which cannot be referred to inflammation, which have not the same progress, and do not require the same treatment. It is in consequence of an imperfect recognition of these facts that antiphlogistics have been improperly applied; and this again has caused animadversions to be passed on the physiological doctrine, that it does not deserve.

I shall finish this lecture with a classification of diseases or a kind of nosological distribution, which I do not present to you as definitive, but which may give you an idea of the plan of this course of general pathology and therapeutics. I have endeavoured to arrange so that the principal phenomena shall be placed in the front, and those dependant on them subsequently. In this manner we shall have to study—

1. Acute and chronic inflammations. These will first be considered in the different apparatus, for there they are more easily recognised; then in the organs forming these apparatus: and lastly, in the tissues forming the organs, in which it is not always easy to distinguish them. They will then be arranged according to a degree of descending evidence, commencing with those the deduction of which is easy, and closing with those in which it is less so. The causes of these inflammations will be divided into those common to the majority, and treated of according to the five orders of hygienic materials, and into specific causes.

2. Sub-inflammations. Here the same order will be observed.

3. Neuroses. We shall have those of the nervous centres, of the nervous cords, and of the nervous capillaries. We shall divide them into neuroses consequent on inflam-

mations, and sub-inflammations, and into primitive neuroses as they arise from common or specific causes, just as in the inflammations and sub-inflammations. This distinction among the causes appears to be important, because it has been attempted to establish a class of specific affections, apart from irritations. There are, however, irritations sometimes inflammatory, sometimes sub-inflammatory, sometimes nervous, all exhibiting the same phenomena as the common, though differing in their progress.

4. Organic alterations, which sometimes become the predominating disease. These will be dwelt upon in the different apparatus, organs, and tissues, considering them in the descending order of evidence, as the effects of preceding affections (external violence included), and as primitive, or arising from unknown causes. (Vicious conformations are in this category).

5. Alterations of the fluids which are stagnant, diffuent, or disordered; stagnant in the vessels, out of the vessels, in cavities: diffuent from the vessels, secretory organs, or cavities: disorderd in the vessels, in the cavities, or the interstitial spaces. All these will be considered either as caused by the preceding affections, or by known or unknown causes independent of them.

6. Debilities; to be considered in the organic apparatus, in the organs, in the tissues, and in the entire organism, according to the degree of descending evidence, as effects of preceding affections or as primitive. In the latter character they recognise known or unknown causes, the former being similar to or dissimilar from those of the preceding affections, while the unknown remain to be discovered by analogy or otherwise.

7. Anomalies of the vital phenomena hitherto inexplicable; this is a provisional section.

As regards therapeutics or the action of the modifying, curative means, applicable to disease, this will be placed after each series of analogous affections. In this manner I think no disease will pass without investigation.

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LECTURES
ON THE

PHYSICAL EDUCATION AND DISEASES OF INFANTS,
FROM BIRTH TO PUBERTY.

By DR. RYAN,

*Delivered at the Medical School, Westminster Dispensary, Gerrard Street, Soho;
Session 1834-35.*

LECTURE XXXVI.

Petechiæ—Cyanosis—Lentigo—Ephelis—Chloasma—Aurigo or Icteritia—Kironosis.

GENTLEMEN—Petechiæ are small spots of a livid red colour, formed by a drop of blood deposited in the tissue of the skin.

They are often observed in typhus, small-pox, measles, and other contagious diseases. The history of this disease is graphically given under the title Hemacelinosis, by M. Rayer, in his work on diseases of the skin, and will be noticed on a future occasion. This disease is frequently observed in adults, but rarely in infants. It affects feeble, delicate, or ill-nourished infants. The skin is dotted with a number of small round violet red spots, which are sometimes of a black colour. They arise from a diseased state of the blood, according to some; and of the capillary vessels, according to others. Petechiæ may occur with or without fever in adults and children. In the latter there is seldom any fever, but in severe cases there may be hæmorrhage from the gums, stomach, intestines, or bladder; or there may be inflammation of these organs. I have seen three remarkable examples of petechiæ in children between two and three years old, and a cure was effected by carbonate of soda saturated with lemon juice, and proper doses of quinine, with mercurial pill, as recommended by Dr. Harty, of Dublin. One of these children was declared incurable at the Middlesex Hospital, and another at the Infirmary for Children, Golden-square. I have not seen the disease congenital; but it has been observed at the Foundling Hospital in Paris, by M. Billard. He states that he had seen the disease in two new born infants, who presented a most remarkable state of debility and prostration of strength; one of these was eight days old, in whom the disease gradually disappeared, after assuming a dark, livid, and yellow colour; the other, who was younger and more feeble, died almost immediately. It was aged three days, and was admitted into the Foundling Hospital, March 27th, 1826. It was of the full size, its skin slightly jaundiced, and its lower extremities œdematous. The face, the trunk, the legs and arms, were covered with violaceous petechiæ of different sizes. Their diameter varied from a very small size to that of a lentil seed. The unequal manner in which they were disseminated, and the yellowish spaces which presented between them, gave the skin the appearance of that of a tiger. The infant remained in this state of inanition for two days, drinking some drops of milk, crying much, and respiring with difficulty. It died on the night of the 29th of March, and the body was examined next morning.

Digestive Apparatus.—The stomach was filled with a very large quantity of viscid black blood, the internal surface, as also that of the jejunum was covered with petechiæ similar to those on the external surface of the body. There were effusions of blood in different parts of the intestinal canal, and the mucous membrane corresponding to these effusions, presented petechial ecchymoses, like those of the stomach; the end of the ileum contained a blacker and more fluid blood; the large intestine

was the seat of a follicular eruption; it contained, near its extremity, a considerable quantity of blood; its parietes were thickened and firm. The spleen was extremely large, and gorged with black blood; it presented, near the insertion of the short vessels, an oblong and superficial rupture, on the surface of which adhered a clot of blood, which was solid. A large tea-cupful of blood was found in the abdominal cavity, which resulted most probably from the rupture in the spleen. The heart was very voluminous, and gorged with blood; a yellowish fluid was in the pericardium; the surface of the heart was covered with petechiæ, so were the pleuræ. The foetal apertures were free; the lungs were engorged; the kidneys and bladder presented numerous ecchymoses. The brain was the seat of great congestion.

The cellular tissue of the extremities and abdominal integuments presented large ecchymoses, and the blood which formed them was infiltrated and coagulated in the meshes of this tissue.

The state of this infant was similar to what has been often observed in the adult. The different sanguineous exhalations resulted from plethora and congestion in the respiratory and circulatory apparatus. The coincidence of the sanguineous exhalation on the internal and external surface is worthy of remark. I remember the case of a male child aged three years, who was a patient at St. John's Hospital, under my care, in whom the symptoms and morbid appearances were precisely similar to the preceding; but in this case there was effusion of blood on the base of the brain.

The treatment consists in the use of vegetable acids, on the principle of its being nearly allied to scurvy and purpura; and according to Dr. Stevens (*Treatise on the Blood*), of saline remedies. He advises muriate of soda, nitrate of potass, tartarized soda, and the carbonate of soda, saturated with lemon juice. The following formula was recommended by Dr. Stevens during the malignant cholera of 1832, which some declared to be efficacious and others useless.

Muriate of Soda, 1 drachm; carbonate of soda, 1 scruple; oxymuriate of potass, 7 grains—to be given in a wine glassful of water every quarter of an hour.

Mr. Cameron declares, in his work on diet, that Dr. S. plagiarised from his report sent to the Navy Board in London, in which he gave many cases of scurvy cured by nitrate of potass; and he further added that the patients became of a florid complexion by the use of this remedy. It has been given in barley-water, whey, &c., in fevers, from time immemorial, and its antiseptic power in preserving animal food is too well known to require further notice.

M. Billard advises to leave hemacelinose or petechiæ to nature; but when there is well marked sanguineous congestion, then leeches should be applied over the affected part.

Cyanosis—Lentigo—Ephelis—Chloasma.—There are other alterations in the colour of the skin, which may be congenital. Cyanosis or blueness of the skin is sometimes observed, and is caused by the want of obliteration of the foramen ovale, or foetal opening between the auricles of the heart. This defective organization of the heart allows the intermixture of the venous and arterial blood, and causes a dark, dusky, indigo, leaden, or blue colour of the skin. The coloration may be general, or very slight when the aperture is small, and life may be continued to an indefinite period; but the general health will be delicate, with a peculiar coldness of body. This coloration may continue for life, or gradually diminish and disappear by the complete closure of the foramen ovale. There are various other spots, such as the different varieties of lentigo (freckles), ephelis (tan or sunburn), chloasma or hepatic spots (*maculae hepaticae*), which may be congenital, though they usually appear at later periods of life.

Aurigo—Icteria—Congenital Jaundice.—M. Baume relates a case of an infant (*Mémoire couronné par l'ancienne faculté de Médecine de Montpellier, Obs. 10*) whose mother was affected with jaundice; it likewise was affected with the disease, and which augmented after birth. This infant died at the end of four weeks, and at the autopsic examination the choledic duct was found obstructed by a viscous and yellow matter; the liver had contracted some adhesions at its left lobe; the right lobe was almost obstructed and hard.

M. Desormeaux describes a female infant, born at the full time, who was extremely thin and feeble. Its skin was of a yellowish green colour, like that of the surface of a hardened yolk of egg. The amniotic fluid was also of this colour, and tinged the linen cloths on which it was effused, of a yellow colour. This infant, after some time, became of a natural colour, and acquired good health. (*Loc. Cit. p. 400*). Kerkringius cites the case of a woman affected with jaundice, who was delivered, at the eighth month, of a dead infant, so yellow that it appeared like wax. On dissection, all the tissues, and even the bones, were tinged with the same colour. (*Spicileg. Anatom. Obs. 57, p. 199*).

Kirronosis.—M. Lobstein describes a disease of the embryo and foetus, which he termed *kirronose*, in which the serous and transparent membranes, as well as the nervous pulp, are stained of a fine golden yellow colour, which cannot be removed by boiling, or maceration in water or alcohol. It is only the action of light that renders it pale, and causes it gradually to disappear. The cause of this coloration is unknown. (*Mémoire sur la Kirronose Report. d' Anatomie, t. i, p. 28*). M. Billard describes four cases in which the brain and spinal marrow were of an intense yellow colour; two in

which this colour was in isolated spots, and three in which the spinal marrow was yellow and uniform. In these last there was general jaundice of the integuments. (*Traité des Malad. des Enfants, 1834*). He also remarks that Lobstein observed the yellowness of the spinal marrow before the possibility of the secretion of bile.

This Professor has met with another kind of jaundice, consisting of an infiltration of a yellow fluid in the cellular tissue of the skin, muscles, and organs, the effect of a complete disorganization of the cerebellum in a full grown foetus, which died and was examined a few hours after birth. It is worthy of observation that it manifested marked signs of muscular irritability and contractility seven hours after death.

The foetus was born after a natural parturition of six hours. It was small for an infant at the full period; very yellow over the whole of the body; it had excoriations on the face, and the epidermis of the feet and hands was elevated. The intestinal tube was moderately filled with a yellow albuminous fluid, and there was no meconium. The liver was of the ordinary size; the gall bladder contained a green thin matter. The spleen was very voluminous, three inches in length, and one and a half in breadth. The urinary bladder was half filled with a yellow albuminous fluid resembling that contained in the intestines, and had its membrane spotted with purple red patches, resembling petechiae. The umbilical arteries and veins were contracted, and their walls thicker than in the ordinary state. The lymphatic vessels of the chest were very apparent: some of them appeared distended with a yellow fluid; the conglomerate glands were equally yellow and semi-transparent. The tunics of the arteria innominata and the right carotid artery were strewed with the same purple spots as the vein. They were not effaced either by ablation or by scraping the vessel. An incision of the teguments of the head being made, there was found the remains of a tumefaction of the scalp. Under the cranium were observed, 1st, a yellow lymph effused between the pia mater and the cortical substance, which extended upon the surface of both hemispheres; 2nd, a collection of blood in two points of the brain, one behind the right frontal protuberance, the other under the left parietal protuberance; 3rd, there was little blood in the vessels of the brain, or in the sinuses of the dura mater, and there was no water in the ventricles; 4th, the external layer of the cerebellum was of a deep red colour, about a line in thickness, which, being incised, presented a total disorganization of the substance of the cerebellum, which was changed into an albuminous matter, thick, of a yellow colour, and like the yolk of an egg, which had been beaten up. The medulla oblongata, the nerves which belonged to it, as well as the spinal

marrow, did not present any extraordinary appearance; nevertheless, between the dura mater and the laminae of the vertebræ was found a yellow lymph resembling that which was effused upon the hemispheres of the brain. The muscles, in general, were pale, inclining towards a yellow colour; they presented, as well as the right cavities of the heart, marks of a very intense irritability. The interstices of the muscles, the subcutaneous cellular tissue, and especially that of the arteries, were soaked in the same yellow fluid of which I have spoken above.

This case merits attention on several accounts, and especially upon that of the alteration of the medullary substance of the cerebellum, of which there is no similar analogy in the brain of the adult; for, according to M. Lobstein, it does not resemble either encephaloid disease, or medullary sarcoma; which proves, as the learned Professor observes, that greater stress than ever ought to be laid on the study of the change of organization in the tenderest age, and that the comparative study of the diseases of the foetus and adult, would be more fecund in new and interesting results.

Some lecturers in this country deny that jaundice may be congenital. This only proves their superficial acquaintance with the records of medicine, as well as their limited observation. The disease is certainly rare, and may not have been observed by an individual practitioner; but this is no satisfactory proof that it may not or does not exist. I have seen it, and shewn the infant so affected to my pupils at St. John's Hospital, in 1834; and others may now see it in health.

M. Billard dissected eighty new born infants affected with jaundice. In four cases the brain and spinal marrow were of a deep yellow colour; the tissue of the heart, the pericardium, the pleura, the peritoneum, the conjunctiva, the mucous and peritoneal coats of the intestinal canal, the inner coat of the bladder and abdominal parietes were jaundiced. He never saw the lungs icterous, though often infiltrated with a yellow serum. The liver was generally yellow. The muscles were yellow in some cases, while the cellular and adipose tissue were perfectly white. In other examples the adipose tissue was jaundiced, without the integuments, muscles, or different organs having been affected. He states that jaundice may attack different parts in succession. In the eighty cases, there were fifty in which the liver and abdominal vessels were gorged with blood; though forty were without jaundice. In two instances only was the bile more abundant and copious than usual. This careful observer remarked, that when the skin was intensely red, and left a yellowish mark after pressure with the finger, instead of a white one, jaundice generally supervened from the third to the eighth day. He concludes, first, that jaun-

dice may be local; second, that the states of the liver and the bile vary most considerably; and the exact morbid condition of the former, which causes jaundice, is perhaps unknown; third, that the congested state of the liver or integuments does not invariably induce the disease; the cause of which is unknown. He objects to the opinion of Armstrong, Underwood, and Dewees, who make a distinction between jaundice of infants and adults, on the grounds, that in the latter, the alvine evacuations are white, the tears and different secretions are yellow, which he considers as the result of a more intense degree of the same disease.

Lastly, he advises that all cases should be left to nature; and that medicines are unnecessary, unless the cerebral, thoracic, or abdominal organs are affected. This is a general opinion with our best national, and many foreign authors; but though it is correct in most instances, it is liable to exceptions. I have repeatedly observed cases of jaundice in new-born infants, "yellow gum," which did not yield to any plan of treatment, but proved fatal; and I should not rest satisfied unless I employed mercurial purgatives in these cases. It is true that the disease generally disappears in a few days, though it may continue for weeks, notwithstanding the most active treatment. It is astonishing what large doses of aperient medicines are necessary in this disease; I have known so much as four grains of calomel and three tea-spoonful of castor oil exhibited to an infant of two days old, before the bowels were acted upon; and even much larger doses have been exhibited.

Professor Hamilton of Edinburgh has repeatedly ordered the syrup of buckthorn, which he discovered was compound tincture of aloes, in the dose of an ounce before it acted as aperient in some cases. The forty-eighth part of this quantity would act briskly on most young infants. A gentleman connected with the Royal Infirmary for Children in the Waterloo-road, informs me that he has known calomel urged to the extent of an ounce in some diseases of children, without bad effect, but with advantage.

I have recently directed your attention to a case of congenital jaundice at the hospital, which most of you have seen. The mother had laboured under the disease during the two last months of uterine gestation, or pregnancy. Her infant was born feeble and delicate, and as yellow as an adult affected with jaundice. It was drowsy and evinced a want of appetite. Its jaundice continued for six weeks. It gradually got well by the use of calomel, castor-oil, and manna; and is now as healthful an infant as any of its age.

The icterus neophytorum, or "yellow gum" of nurses is generally a slight affection, and usually yields to calomel and castor-oil; but it may prove fatal. There is no less reason why an infant should la-

bour under hereditary jaundice than under syphilis, small-pox, &c. The disease often supervenes after birth, and this owing to the improper food which is almost invariably given to new born infants, which deranges the stomach and digestive organs, including the bowels and liver, &c. It is also worthy of recollection that the skin may be of a bronze colour at birth, similar to that produced by the long use of lunar caustic or nitrate of silver in adults. It may also be preternaturally white in congenital anasarca and other dropsies.

Congenital Inflammation of the Skin.—A great diversity of opinion has long existed among physicians on the subject of congenital inflammations of the skin; some relating cases in proof of their existence, and others denying the authority of such observations. The majority of obstetricians, however, entertain the affirmative, and some able writers the negative. It has long been admitted that infants may have been labouring under syphilitic eruptions, generally of a dark or copper colour, and these are most common about the generative organs. For my own part, I am decidedly of this opinion, though others have disputed it. Among these is M. Andry, whose valuable monograph on congenital diseases I have already quoted. He argues as follows: Of all the eruptive affections, small-pox is the one which appears to have been observed most frequently on the foetus. Many authors pretend they have seen the infant born with true variolous pustules, or with cicatrizations having the greatest resemblance to those which follow this disease; others have seen infants born at the natural period or prematurely, presenting the different degrees of the variolous eruption: some of these infants died a short time after their birth, others have lived, and after their cure have presented the natural cicatrizations of small-pox. Some of these facts had been observed in foetuses whose mothers had been affected with small-pox, or exposed to the contagion of the disease during pregnancy, so that a great many authors contend that small-pox, as well as all other contagious diseases, such as measles, syphilis, &c., were transmitted directly from the mother to the foetus. Some observations appear to militate in favour of this opinion; but other facts prove that the foetus may be spontaneously affected with small-pox without the mother having experienced any symptoms of the disease during pregnancy, or having been exposed to the variolous infection; besides, many most respectable authors having denied all direct transmission of contagious diseases from the mother to the foetus, while contained in the womb; it is therefore possible to doubt of the certainty of the first opinion. It has been the same with vaccination; and here transmission has not only taken place, but in certain cases, it is said that the vaccine tubercles have been seen developed in the

same part of the foetus as the inoculation had been performed in the mother. A case proving what we are now speaking of, is related in the *Journal de Progres des Sciences et Institutions Medicales*, t. xv, p. 246. The mother had been vaccinated nine days before parturition, and the infant, of which she was confined, had upon the arm regular vaccine tubercles, in the same number and on the same points that the mother had. This would certainly be one of the strongest proofs in favour of the transmission of contagions from the mother to the foetus; but this equality of number, this same position of pustules, the information obtained from the parents and other persons dwelling in the same habitation, all strangers to medical science, desirous of the marvellous, &c., all make us doubt the veracity of this observation; moreover, if such was really the case, similar facts would take place more frequently, and it would be sufficient to vaccinate the mother to preserve the infants they carry in their wombs from contracting the small-pox, not only during intra-uterine life, but even after birth. Unfortunately it is not so; and the two very interesting cases related by the celebrated Dr. Jenner, in which two females, being vaccinated during gestation, were confined with two infants, having variolous pustules perfectly developed, prove that the foetus may be affected with variola spontaneously, and without the mother transmitting the disease to it (p). Dr. Joerg of Leipsic, in his excellent *Manual of the Diseases of Children* (*Handbuch Zum Erkennen und Heilen der Kinder Krankheiten*, 1826), has produced some very strong proofs against the direct transmission of any contagious disease whatever from the mother to the foetus (l). After having established that contagious affections can only be transmitted in three different ways, namely, by miasms, contact, and inoculation, he successively examines, if the foetus be found in a situation capable of receiving the contagion in any of these three ways. The blood, which is the only direct communication between the mother and foetus, is not capable in any disease of transmitting contagion from the individual to whom it belongs to another person; thus to communicate hydrophobia, the plague, syphilis, small-pox, vaccination, &c., it would be useless to endeavour to convey these diseases by the blood of any of the individuals affected with any of them; it must be by the saliva or pus of buboes, venereal chancres, variolous, or vaccine pustules, to which recourse should be had! (This opinion is contrary to the fact, as small-pox, syphilis, and other contagious diseases are transmitted to the foetus through the blood, or in some way at the time of procreation). Moreover, the membranes which envelope the foetus are living organs, almost similar to plants, and consequently slightly or not at all capable of isolating the foetus, but prevent

it from contracting contagion; they are even an insurmountable barrier to all kinds of miasma. It is the same with respect to the liquor amnii, in which the foetus floats, and which, in continually moistening the nasal fossæ, the mouth and apertures of the other cavities, is opposed to the entrance of every contagion or miasm into these passages. It is only when these membranes are torn, that the liquor amnii has been discharged, when the foetus is in immediate contact with the walls of the womb or vagina, that the possibility of contagion from the mother to the infant can be reasonably admitted; and in this case the mother infected with syphilis, small-pox, and other similar diseases, may transmit these diseases to her infant, but in these cases the phenomena of disease are only manifest some time after birth.

It is well known that many individuals, from causes unknown, are not susceptible of contracting the most contagious diseases, even in the most favourable circumstances for contracting them; if we consider the principle acts of the life of the foetus, and especially the respiration, the slight activity of the skin, the nullity of the brain and nerves, the absolute defect of the action of the organs of sense, &c., it will be seen that the foetus possesses in a slight degree, the faculty of receiving, by transmission, the contagious diseases of the adult age, as it does of transmitting them itself. Moreover if it can be affected by contagion in the womb of the mother, why do not the embryos and new born infants present traces of, or even the diseases with which the mother was affected? We may remark here, that infants in the first months of their existence are little apt to contract every species of contagion; and it is a received precept of the present day, that vaccination ought not to be performed until six weeks or two months after birth. Innumerable observations have shown that the skin of an infant, at this age, is little susceptible of receiving vaccine contagion.

In always not admitting any species of direct contagion from the mother to the foetus, at the same time it is impossible to deny, that if the pregnant woman be affected with serious contagious diseases, these would have a marked influence on the health and development of the foetus, from the inevitable injury which would be the consequence; it is thus that Duettel (*De morbis foetuum*, dissert. præses F. Hoffman, Italæ, in 4to, 1602, p. 26) relates a case in which a woman, a short time before her confinement, was seized with confluent variola: she produced a healthful infant to all appearance, and presenting no traces of variolic pustules, which nevertheless died of convulsions on the sixth day after its birth, and in which the intestines were found gangrenous in several points of their extent. It is my opinion that small-pox, as well as all other

diseases, may develop itself spontaneously in the foetus, the same as we see it take place in infants and adults, without having been exposed to contagion; that it may go through its different periods, during the abode of the foetus in the uterus, leave on its skin the natural cicatrizations, and in fine, that it may affect it at its birth, or cause the death of the embryo at an epoch more or less distant from its intra-uterine life. Mauriceau himself, according to the account of his parents, came into the world with the seeds of small-pox.

Some persons pretend that the foetus may be affected with measles; but without denying the possibility of this assertion, we think it would be very difficult to establish it. In other respects, the reflections we have made concerning small-pox may equally refer to the measles, as also to scarlatina, which at present has not been observed in the foetus. (*Mémoire Sur les Maladies du Fœtus et de ses Annexes. Par V. Andry, D.M.P. Journ. de Progress des Sciences et Institutions Médicales, 1830, t. 1, p. 142, &c.*)

The opinions maintained in the foregoing quotations are very easily refuted. In the first place, I shall prove, by numerous citations, that the infant in the womb may be born with the eruption of small-pox, measles, and syphilis; in the second place we have only the author's assertion that the infant may be born with small-pox, though the mother has not had the disease—an assertion in open contradiction to his doctrine, that contagious diseases are not transmissible from the mother to the infant in her womb; thirdly, he cannot reasonably deny a positive fact, that the infant, whose mother was vaccinated a few days before delivery, laboured under vaccination; fourthly, he draws an objectionable conclusion from the two cases related by the illustrious Jenner—that infants whose mothers had been vaccinated a short time before parturition were born with small-pox! because recent experiments have proved beyond all doubt that vaccination is only a modification of small-pox; fifthly, the hypothesis of Dr. Joerg is opposed to facts, as every one engaged in the practice of obstetrics is aware that the foetus in utero may be contaminated, at the moment of conception, with syphilis, though neither parent has the disease in a primary form; and several successive premature births will take place between the seventh and eighth months of pregnancy—the infants being born dead and putrid, as attested by Dr. Beatty of Dublin, Dr. Hamilton of Edinburgh, &c. (See my *Manual of Obstetrics*.) And it is also well known to observant practitioners, that infants may be born alive with copper-coloured eruptions, which will only yield to mercury, taken by the parent or the little sufferer—when a cure will be speedily effected, and the infant rapidly acquire strength and vigour, as I attest by many observations made in hos-

pital and dispensary practice. It will be admitted that the contamination of syphilis will vary in different constitutions. Some affected will have healthful infants; others will produce feeble delicate offspring, with eruptions or ulcerations on the genital organs, and when the parents are deeply infected, their infants will be born prematurely, between the 7th and 8th months of pregnancy, the body being deprived of life for some time, and putrefaction apparent. In this last case the parents cannot be cured, unless they undergo a course of mercury before the woman is again pregnant; for otherwise repeated courses may be tried in vain, as the infants will continue to be born dead, and putrid. Infants are born with ulcerations, independently of syphilis, as noticed by Hippocrates. I knew a lady who was salivated four times during different pregnancies, but she still had premature labours, and the infants were born dead, and putrid. On the last occasion she began the use of mercury, after having missed one menstrual period. I told her it was extremely likely that she was pregnant, as women affected as she was have a great aptitude for conception, and that if she was in this state, the infant would be born dead as before. My opinion was correct. I advised a conjugal separation for some weeks after her delivery, during which the husband and wife took mercury and sarsaparilla. The latter soon conceived, bore a living infant, and has now a large family. My idea was that the offspring was infected at the moment of conception; and before this, that the parents should be cured, to exempt it. I shall now adduce ample evidence that the infant in the womb may labour under small-pox or measles, and consequently under contagious diseases. Sober reflection on the following facts must convince every candid hearer of the truth of this position.

—o—

NEW REGULATIONS, APOTHECARIES'
HALL, &c.

“Quod si contemplationem legis naturæ satis comprehendissent, etiam illud scissent.”

To the Editor of the London Medical and Surgical Journal.

SIR—The regulations which you have inserted in the last number of your journal, as emanating from the collected wisdom of “Rhubarb Hall,” fully justifies the application of the censure conveyed in the motto which I have chosen for the heading above. No doubt these worthies are acquainted with Erasistratus—at least by name—and consequently I need not point out to their notice the author from whom I have quoted; but I shall merely observe that the present application is neither an overstrained or forced perversion.

It appears to me, that all the regulations

as to study, lectures, &c., have been framed by the worthy “or Worshipful” Society, as if for the mutual advantage of themselves and the Royal College of Physicians. Thus: “no lectures on the practice of physic would be received, unless—if delivered in London, or within seven miles thereof—delivered by a fellow licenciate, &c., of the College of Physicians.” The new regulations include “Materia Medica,” under the same regulation; “and both the former and the latter delivered without the bills must be by a fellow, &c., or by a graduated doctor of a British University of four years’ standing.” Now, sir, the first inquiry is, have the Apothecaries’ Company any such powers? I maintain not. In the first place, the association with the College of Physicians confers no abstract or independent right to teach medicine in any of its branches. The privileges, &c., of the College extend to the *practice* only of physic within the bills, and they have nothing whatever to do with the teaching.

The degree of doctor from a University confers the right—I mean the legal right—to teach in that faculty in which the degree has been taken; and if by *British University* be meant those of Oxford or Cambridge, although the law does not recognise the abstract right of any other to practise physic, yet I doubt if it excludes the graduates of other universities from *teaching* medicine. Now I understand the Worshipful Company have a solicitor, and lawyers of various kinds attached to their establishment; and surely it would be as well that they submitted their crude and unconcocted regulations to such salutary revision, before they exposed themselves by assuming powers infinitely greater and more arbitrary than those so unhappily granted to them by law. I will remind them of a short clause in their own act—that is, the act constituting them a corporate body: “Provided, however, that nothing herein shall be taken or construed as in any manner affecting the *rights and privileges* of the Royal College of Physicians, or of our other *Universities of Oxford and Cambridge*.” Now I ask, are not the regulations a direct and positive encroachment upon the rights and privileges of the two, and indeed of all other universities? The regulations are based upon the principle of compelling graduated physicians to associate with the Royal College, and empty their pockets into the coffers of the College. I have no hesitation in asserting, that the Court of King’s Bench would compel the Court of Examiners to admit a candidate presenting certificates from a graduate in medicine in a British University, to examination, in despite of their regulations; and I have good reason to believe, that if the Society last sufficiently long, and refuse to examine a candidate under the above circumstances, the right will be tried in the Court of King’s Bench, by moving for a mandamus. Let then this Worshipful Company consult their legal advisers before they get into a hobble;

for should matters come to issue, they will reap nothing but defeat and disgrace. I remain, &c.,
ALPHA.

London: May 14, 1835.

—o—

A NEW PRACTICAL FORMULARY

OF HOSPITALS, OR A

Collection of Formulæ of the Civil and Military Hospitals of France, Germany, Italy, Great Britain and Ireland, &c., containing the Indication of the Doses in which simple Substances, magistral and officinal Preparations of the Codex are administered, the use of New Medicines, and general precepts on the art of prescribing. By M. EDWARDS, M. D., and P. VAVASSEUR, M. D., of the Hospitals of Paris—1834. Translated and augmented by M. RYAN, M. D. &c. &c.

(Continued from p. 499.)

FORREL.

A refrigerant and antiscorbutic very much employed. [It is scarcely ever used as a remedy in this country. T.]

INTERNALLY. *Decoction.* Manip. i—ij in Oij of water.

Refrigerant and Diuretic Juices. P. ʒj—iv in the morning.

HERB BROTH.

Rx. Acetosellæ,
Pyri,
Chærophylly,
Lactucæ com., ā ā manip. j;
Butyri,
Sodæ muriatis, ā ā q. s.
Aquæ, Oij.

Coque et cola.

A small cupful at a time, to facilitate the action of purgatives.

[Common barley-water or oatmeal-tea would perhaps be as efficacious. T.]

ORANGE JUICE very much resembles that of Lemon, and, like it, is used to prepare a Sirop, P., which is employed as a refrigerant.

WHITE and RED GOOSEBERRIES, MULBERRIES, CHERRIES, RASPBERRIES, the POMEGRANATE, &c., are also employed to prepare refrigerant drinks. Syrups, which are in constant use, are likewise prepared from them.

CHAPTER XV.

MEDICINES EMPLOYED AS EMOLLIENTS.

GUM ACACIA.

AN emollient which is very much used in cases of gastritis, phlegmasia of the air passages, &c., and which enters into the composition of a great number of officinal preparations.

INTERNALLY. *Powder.* ʒss—ʒj, in a potion.

Solution, ʒss—j to Oij of water.

The *Eau de Gomme* of the H. de Paris contains ʒss of gum to the same quantity of water.

Mucilage of Acacia Gum. P. ʒss—j, frequently during the day. This preparation is generally used as a vehicle for other medicines.

Gummy Alkaline Powder, or Vegetable Soap. P. ʒ of acacia, ʒj of carb. potass. Gr. xij—ʒj, and more.

Pâte de Gomme Arabique. P.

Sirop. P. ʒj, and more, to sweeten emollient drinks.

Ptisaniferous Powder. H. of Montp.

Rx. Gum. acaciæ,
Extracti glycyrrhizæ, ā ā ʒij;
Potassæ nitratis, ʒij.

A tea-spoonful in a glass of water.

Gumous Potion. H. de la Ch.

Rx. Gummi acaciæ, ʒj;
Aquæ, ʒij;
Syrupi simplicis, ʒj.

Misce.

Gumous Emulsion. H. of Germ.

Rx. Gum. acaciæ, ʒss;
Emulsionis, simplicis, ʒxij;
Aquæ, q. s.

Misce.

ʒij—iv to be taken frequently during the day.

Calmant Potion. H. of Italy.

Rx. Gum. acaciæ, ʒj;
Aquæ destillatæ, ʒss;
Syrupi althææ, ʒjss;
Decocti hordei, Ojss.

Misce.

The dose is half a glassful. Used in nephritic colic.

Mucilaginous Mixture. H. of Eng.

Rx. Mucilaginis acaciæ, ʒvij;
Misturæ gum. acaciæ, ʒij;
Aquæ destillatæ menthæ, ʒv;
Syrupi simplicis, ʒj.

Dosis ʒij ter in die.

Simple Looch. H. des Ven.

Rx. Acaciæ gum.,
Sacchari, ā ā ʒij;
Aquæ, ʒv.

Misce.

Employed as an emollient and excipient for other medicines.

GUM TRAGACANTH.

It possesses the same properties as gum acaciæ, and is employed in the same cases. It is also used to give a consistence to certain preparations, and to suspend certain insoluble substances in water.

INTERNALLY. *Powder.* Gr. x—xv, in a potion of ʒiv.

Mucilage. P. ʒj—ij.

Compound Powder Gum Tragacanth. H. of England.

Rx. Gum. tragacanthæ,
— acaciæ,
Amyli, ā ā ʒjss;
Sacchari, ʒij.

Misce.

ʒss—ij in an aqueous vehicle.

MARSH-MALLOWS.

An emollient very much employed, both internally and externally, in the treatment of phlegmasia. [Seldom used in this country. T.]

INTERNALLY. *Decoction or Infusion*, \mathfrak{z} j to Oj of water.

The *Infusions of Marsh-mallow* of the Hôt. D. and de la Ch. do not differ from the above preparation.

Sirop. P. \mathfrak{z} j—ij, to sweeten emollient drinks.

Tablettes de Guimauve. P.

Mucilage of the Root of Marsh-mallow. P.

Infusion of Marsh-mallow. H. Militaires.

Rx. Althææ, \mathfrak{z} ij;

Glycyrrhizæ, \mathfrak{z} j;

Aquæ, Oijss.

Decoque ad Oijss et cola.

A small cupful taken at a dose.

EXTERNALLY. *Decoction*. In lotions, fomentations, local baths, &c.

Emollient Collyrium. H. des Enf.

Rx. Radicis althææ, \mathfrak{z} j;

Aquæ, Oss.

Decoque et cola.

Employed in acute ophthalmia.

Calmant Gargle. Hôt. D.

Rx. Decocti althææ, \mathfrak{z} vj;

Syrupi mellis, \mathfrak{z} ij.

Misce.

Employed in inflammatory angina.

The *Gargarisme de Guimauve* of the H. de la Ch. does not differ from the preceding.

Calmant Fomentation. H. of Germ.

Rx. Foliorum althææ, manip. iv;

—— papaveris, manip. j;

—— hyoscyami, pug. ij;

Aquæ, Oj.

Decoque et cola.

Emollient Enema. H. de la Ch.

Rx. Radicis althææ, \mathfrak{z} j;

Aquæ, Oj.

Decoque et cola.

MALLOW (LEAVES AND FLOWERS).

They possess the same properties, and are used in the same manner, and in the same cases as the marsh-mallow.

INTERNALLY. Flowers. *Infusion or Decoction*. Pinc j—ij to Oij of water.

Pectoral Ptisan. F. A small cupful at a dose.

Infusion of Marsh-mallow. Hôt. D. and H. de la Ch.

Rx. Florum malvæ, \mathfrak{z} ij;

Aquæ ferventis, Oij.

Decoque et cola.

A small cupful at a dose.

EXTERNALLY.

Fomentation of Mallow. H. de la Ch.

Rx. Fol. malvæ, \mathfrak{z} j;

Aquæ, Oj.

An emollient.

Calmant Gargle. H. de la Mat.

Rx. Infusi florum malvæ, \mathfrak{z} iv;
Lactis recentis, \mathfrak{z} i.

M.

BORRAGE (LEAVES AND FLOWERS).

Borraga is an emollient, diuretic, and sordific, much employed in a number of inflammatory affections.

INTERNALLY. *Decoction and Infusion*. Manip. j—ij to Oij of water.

The *Decoction of Borraga* of the Hôt. D. and de la Ch. contains \mathfrak{z} ij of the flowers of borraga to the same quantity of water.

Expressed Juice. P. \mathfrak{z} ij—iv.

Distilled Water. P. \mathfrak{z} ij—iv, as a vehicle for diuretic potions.

Extract. P. \mathfrak{z} j— \mathfrak{z} j.

Infusion of Borraga. P. (\mathfrak{z} j—Oj, honey \mathfrak{z} j.) A cupful at a dose, taken hot.

COMFREY.

An emollient not much employed at the present day. Formerly very much used in hæmorrhagies from the lungs, intestines, &c.

INTERNALLY. *Decoction*. \mathfrak{z} ss—j in Oij of water.

The *Decoction of Comfrey* of the Hôt. D. contains the latter quantity.

Sirop. P. \mathfrak{z} j—ij, in a potion, or to sweeten calmant drinks.

LIQUORICE.

Liquorice is a pleasant demulcent, principally employed to sweeten ptisans in the hospitals. The powder is used as an excipient for other medicines, and to envelope boluses and pills.

INTERNALLY. *Powder*. Gr. xvij— \mathfrak{z} j. Not much employed.

Infusion. \mathfrak{z} ij—iij in Oij of cold water.

Extract. P. \mathfrak{z} iv— \mathfrak{z} i.

Pâte. P. q. s. A popular remedy for colds.

Pâte de réglisse anisée. P. q. s.

COCOA.

A nutritive emollient; constantly used as an analeptic aliment. The oil concremented is employed as a calmant, in phlegmasia of the pulmonary and urinary organs. Externally it is applied to hæmorrhoidal tumours, chaps of the nipples, &c.

INTERNALLY. *Simple Chocolat*. P. As an aliment and an excipient for other medicine.

Chocolat à la Vanille. P. The same usages.

Oil or Butter of Cocoa. P. \mathfrak{z} j—ij, in an emulsion, or in pills.

Pectoral Cream de Tronchin.

Rx. Butyri cacao, \mathfrak{z} ij;

Syrupi tolutani,

—— capillaris,

Sacchari, ā ā \mathfrak{z} i.

Dosis cochl. mag. subinde.

EXTERNALLY.

Emollient Suppositorium.

Rx. Butyri cacao,
Cerati simplicis, ā ā p. e.

Cerat Employed in Chaps of the Lips.

Rx. Butyri cacao,
Cere albæ, ā ā partem unam;
Olei amygdalæ, partes duas.

Misce.

LINSEED.

An emollient very much employed. It is administered internally in phlegmasia of the urinary organs; also in inflammatory affections of the lungs, &c. It is the most common of emollient cataplasms.

INTERNALLY. *Decoction*, 3 ss—j in Oij of water.

Mucilage. P. 3 j—3 ij.

Infusion of Linseed. Hot. D. and H. de la Ch.

Rx. Lini semin. contusorum, 3 ij;
Glycyrrhizæ radicis, 3 j;
Aquæ, Oij.

Decoque et cola.

A cupful at a dose, taken hot, in inflammatory affections of the urinary system and air passages.

Compound Decoction of Linseed.

Rx. Infusi semin. lini, Oij;
Potassæ nitratis, 3 j;
Mannæ, 3 j.

A cupful to be taken at intervals.

EXTERNALLY. *Decoction*. In lotions, fomentations, &c.

Emollient Catapasm. P. q. s.

Calmant Enema. Hot. D.

Rx. Lini seminum, 3 ij;
Aquæ, Oij.

Decoque cola et adde,

Olei olivæ, 3 ij.

The *Emollient Enema* of the H. de Paris consists of ʒij of linseed.

The *Enema of Linseed* of the H. des Enf. contains 3 ss of linseed to Oj of water.

Emollient Fomentation. H. de la Mat.

Rx. Lini seminum, 3 j;
Florum malvæ, 3 j;
Aquæ, Oj.

Decoque et cola.

Employed in cases of abdominal inflammation, and in inflammatory œdema, which frequently takes place after parturition.

Emollient Catapasm. H. de Paris.

Rx. Farinæ lini,
—— hordei, ā ā p. e.
Aquæ, q. s.

Boil to a proper consistence. It is applied to inflammatory tumours, and upon the uninflamed skin, in cases of phlegmasia of the surrounding parts. It is likewise applied to keep up a flow of blood after the application of leeches.

LINSEED OIL.

Linseed oil is an emollient, and slightly laxative. It is not much administered in-

ternally, on account of its disagreeable flavour. It is used externally in enema, embrocations, &c.

INTERNALLY. 3 ss—j, in broth.

EXTERNALLY. In ointments, embrocations, and as an excipient for divers liniments. q. q.

[The lin. calcis (equal parts) of linseed oil and lime-water is a favourite remedy for burns and scalds in this country. T.]

Emollient Enema. H. of Germ.

Rx. Specierum emoll. 3 j;
Aquæ, Oj.

Coque, cola et adde,

Olei lini, 3 ij.

M.

SWEET ALMONDS.

Sweet almonds are frequently employed in the form of an emulsion, to combat internal inflammation.

INTERNALLY. *Milk of Almonds*. P. 3 ss—j frequently during the day.

Looch Blanc. P. A spoonful at a dose.

Sirop d'orgeat. P. 3 ss—j, to sweeten emollient and diuretic drinks.

Emulsion of Sweet Almonds. H. of Paris.

Rx. Amygdal. dul. 3 ss;
Aquæ, Oj;
Syrupi simplicis, 3 j.

Misce.

A small cupful to be taken at a dose.

Emulsive Ptisan.

Rx. Amygdal. dul. 3 j;
Avenæ sativæ, 3 iij.

Tere simul et adde,

Decocti hordei, Oij;

Syrupi violæ, 3 ij;

Aquæ cinnamomi, 3 iv.

M. *A small cupful at a dose.*

White Looch. H. St. Ant.

Rx. Amygdal. dule. No. xv;
Tragacanthæ pulv. gr. xx;
Syrupi simplicis, 3 ij;
Olei amygdalarum,
Aquæ flor. aurantii, ā ā 3 ij;
—— fontanæ, 3 iv.

Misce.

A spoonful at a dose.

Emulsive Looch. H. des Enf.

Rx. Emulsionis amygdalæ, 3 iv;
Syrupi simplicis, 3 j;
Tragacanthæ, gr. vi.

Dosis cochl. mag. sæpe in die.

OIL OF SWEET ALMONDS.

In large doses almond oil is a laxative; in small quantities an emollient. It is employed in pulmonary inflammation. This oil is used as a laxative to purge children and persons of a delicate constitution.

INTERNALLY. 3 ss—j, mixed with a syrup, or with the yolk of an egg.

Looch sans émulsion. P. A spoonful at a dose.

Lo

The same doses.

Oleagenous Potion. H. de la Ch.

Rx. Olei amygdalæ, ʒ ss;
Gum. tragacanthæ, gr. x;
Syrupi simplicis, ʒ i;
Aquæ, ʒ ij.

Dosis cochl. mag. urgenti tussi.

The *Looch Blanc* of the H. des Enf. differs only from the preceding potion in the tragacanth being replaced by ʒ ij of acacia gum, and the quantity of water being ʒ iv.

The *Looch Simple* of the same hospital contains ʒ ij of almond oil, and the same quantity of simple syrup and of water.

Oleagenous Potum. Hôt. D.

Rx. Infusi bechic.,
Olei amygdal. dul., ā ā ʒ ij;
Syrupi simplicis, ʒ j.

Misce.

Employed in inflammations of the chest, to calm the cough.

The *Oleagenous Potion* of the H. des Enf. contains only ʒ ss of oil to ʒ iv of a gum-mous vehicle.

EXTERNALLY. In embrocations, and as a vehicle for divers liniments.

Simple Cerat. P. q. s.

Cerat of Galen. P. q. s.

Emollient Enema. H. of Germ.

Rx. Olei amygdalarum,
Sacchari, ā ā ʒ j;
Decocti hordei, Oss.

Misce.

Emollient Cataplasma.

Rx. Olei amygdalarum, ʒ ss;
Lactis ferventis, Oj;
Micæ panis, q. s.

Fiat cataplasma.

Sometimes ʒ ij of camphor is added to this cataplasma.

OIL OF OLIVES.

An emollient and laxative, employed in the same cases as the oil of almonds; very much used in cases of poisoning by certain acrid substances. This oil acts also as an anthelmintic, and enters into the composition of a great number of plasters and liniments.

INTERNALLY. ʒ ij—ʒ j, mixed with water by the aid of a mucilage.

Oleagenous Potion. H. des Vén.

Rx. Olei olivæ, ʒ ij;
Mucilaginis acaciæ, ʒ v;
Syrupi capillaris, ʒ ij.

Misce.

Dosis cochl. mag. urgente tussi.

Oleagenous Emulsion. H. of Germ.

Rx. Olei olivæ, ʒ j;
Vitelli ovi, No. j.

Tere et adjice,

Aquæ, ʒ vij.

Dosis cochl. mag.

EXTERNALLY. As a vehicle for divers liniments and enemata.

Oleagenous Enema. H. of Italy.

Rx. Olei olivæ, ʒ iij;
Decocti althææ, ʒ ix;
Mellis, ʒ j.

Misce.

Emollient Enema. H. de la Mat.

Rx. Foliorum malvæ,
—— pyri, ā ā ʒ ij;
Aquæ, Oij.

Decoque, cola et adde,
Olei olivæ, ʒ iij.

Misce.

The WHITE and NUT Oil possess the same properties, and are employed in the same diseases.

HOUSTOOTH.

An emollient and diuretic, daily employed in inflammatory diseases, especially of the urinary organs.

INTERNALLY. Decoction. ʒ ss—j to Oij of water.

Ptisan of Dog's-grass. P. A glassful at a dose. Same proportions, sweetened with liquorice.

Expressed Juice. P. ʒ ss—j.

Decoction of Houndstooth, or Common Ptisan.
H. de Paris.

Rx. Graminis canini, ʒ j;
Glycyrrhizæ, ʒ j;
Aquæ, Oij.

Decoque et cola.

A cupful at a time.

PEARL BARLEY.

An emollient in constant use in a number of acute diseases.

INTERNALLY. Decoction. ʒ ss—j to Oij of water.

Ptisan of Pearl Barley. P. A cupful at a dose.

Compound Decoction of Barley. British Hospitals.

Rx. Decocti hordei, Oij;
Caricæ fructus concisi,
Uvarum passerum, demptis acinis, ʒ ij;
Glycyrrhizæ rad. concisæ et contusæ, ʒ ss;
Aquæ, Oj.

Decoque ad Oij, et cola.

A cupful at a dose.

Decoction of Barley with Gum. H. of Germ.

Rx. Hordei, ʒ vi;
Gum. acaciæ, ʒ j;
Aquæ, Oij.

Coque, cola et adde,
Sacchari, q. s.

Misce.

A cupful at a dose.

Acidulated Decoction of Barley. H. of Germ.

Rx. Decocti hordei, Oij;
Limon. incis., No. ij.

Coque ad Oj et adde,
Sacchari, ʒ ij.

A small cupful at a dose.

EXTERNALLY. Decoction. In lotions, fomentations, injections, gargles, &c.

Farine. In cataplasms.

Resolvent Cataplasma. H. des Enf.

Rx. Farinæ hordei, \bar{z} viij;
Saponis amygdal., \bar{z} iv;
Aque, q. s.

Misce.

RICE.

An emollient and slight nutritive, much employed in inflammations of the digestive tube. [According to Dr. Tytler, deteriorated rice caused cholera in India and Europe, from the first appearance of the disease in 1817, to the last in Europe in 1833. T.]

INTERNALLY. Decoction. \bar{z} ij—iv in Oij of water.

The *Decoction of Rice* of the Hôl. D. and de la Ch. do not differ from the above in their proportions. This decoction is frequently diluted with the decoction of catechu, and sweetened with quinces. It is then employed in cases of diarrhœa, &c.

Acidulated Decoction of Rice.

Rx. Pulveris oryzæ, \bar{z} j;
Aque, Oiv.

Decoque, cola et adjice,
Syrupi hordei, \bar{z} ss;
Succi citri, \bar{z} j.

Misce.

A cupful at a dose.

OATMEAL.

It possesses the same properties as the preceding substances. Much employed in diseases of the chest.

INTERNALLY. Decoction. \bar{z} ij—iv to Oij of water. This decoction, which is commonly called *Eau de Gruau*, is often diluted with milk, and sweetened with the syrup of gum. An infusion (oatmeal tea) is drank to facilitate the operation of purgatives.

STARCH.

The same properties and usages as the above. More employed externally in enemata than internally.

EXTERNALLY. Decoction. \bar{z} ij—iv to Oij of water, in an enema.

Mucilage of Starch. H. of England.

Rx. Amyli, \bar{z} iij;
Aque, Oj.

Rub the starch, gradually adding the water to it; then boil till a mucilage is produced. In clysters. In some cases laudanum is added.

Starch Enema. M. de Santé.

Rx. Decocti amyli, \bar{z} v;
Olei lini, \bar{z} j.

M.

Starch Enema. H. des Enf.

Rx. Amyli, \bar{z} j.
Aque, Oj.

Boil.

DRIED RAISINS, FIGS, DATES, and JUJUBES, are known under the name of *Pecti-*

ral Fruits, and are frequently employed as emollients in diseases of the chest.

INTERNALLY. The pulp of the Date. P. q. q.

Pâte de Dattes. P.

PRUNES possess the same qualities, and are likewise laxative. A decoction of them is employed to purge children.

The seeds of GOURD, MELLON, and CUCUMBER are known under the appellation of *Semences froides majeures*. They are employed to prepare emulsions, which have the same properties as the milk of almonds.

HEMP SEED is employed in the same manner.

Cow's and ASSES' MILK are employed as emollients and slight nutritives in diseases of the chest, either pure or diluted with barley water. (*Hydrogula* of the H. de la Ch.)

WHEY is a refrigerant and emollient. It is employed in inflammatory diseases. It is generally used as a vehicle for other medicines.

GELATIN is used to prepare emollient and strengthening baths. It is the basis of the *Gelée de corne de cerf*, P., and is used in many other preparations.

VEAL, FOWL, TURTLE, FROGS, VIPERS, and LOBSTERS, are used to prepare emollient broths, which are employed in cases of acute disease.

Bouillon de Veau. P. A cupful at a dose.

Bouillon, or Eau de Poulet. P.

Bouillon de Colimacons. P.

Bouillon d'écrevisses. P.

Bouillon de Vipères. P.

Sirop de mou de Veau. P. \bar{z} j—ij, in pectoral drinks.

The *Espèces Emollientes*, P., are equal weights of the following ingredients:—

Dried leaves of Mallow,
————— Marsh-mallow,
————— Mullein,
————— Groundsel,
————— Pellitory.

The *Espèces Béchique*, P., are composed of equal parts of the flowers of the following:

Dried flowers of Mallow,
————— Amaranth,
————— Coltsfoot,
————— Red poppies.

The *Espèces Béchique*, composed of fruits, are equal parts of the following:—

Dates,
Jujubes,
Figs,
Raisins.

The *Espèces Pectorales*, P., are composed of equal parts of

Dried leaves of Maidenhair,
————— Veronica,
————— Hyssop,
————— Ground-ivy.

These preparations are administered in form of decoction, \bar{z} j to Oij

CHAPTER XVI.

MEDICINES EMPLOYED AS CAUSTICS, RUBEFACIENTS, AND EPISPASTICS.

CAUSTIC POTASS.

A VERY energetic caustic, leaving a soft, greyish eschar, which is easily detached. It is employed to establish setons, to open cold abscesses, or, accompanied with induration of the neighbouring parts, to cauterize envenomed wounds, &c. It acts internally as a corrosive poison; nevertheless, it is administered, very much diluted, in gravel, nephretic colics, and other affections dependent on a superabundance of uric acid. It is likewise recommended in the treatment of scrofula and some diseases of the skin, such as leprosy, &c.; but this solution, although much diluted, speedily oppresses the stomach, and causes anorexia; which prevents its use for any length of time.

INTERNALLY. *Solution of Potassa.* P. Gut. v—xx, in a potion.

Alcoholized Solution of Potassa. H. of Germ.

Rx. Potassæ causticæ, 3j;
Alcoholis, 3 viij.

Liqua.

The dose is gut. xx—xl, in a mucilaginous potion, as a diaphoretic, &c.

EXTERNALLY. As a caustic. The manner of applying it is by placing a very small portion in an aperture cut in adhesive plaster, just sufficiently large to cover the part only that is intended to be cauterized. The whole should be covered with another piece of sticking plaster.

Collyrium de Gimberant. H. of Germ.

Rx. Potassæ causticæ, gr. j;
Aque destillatæ, 3j.

Misce.

Stimulating Lotion of Saviard. H. of Germ.

Rx. Potassæ causticæ, 3ij;
Camphoræ, ʒij;
Sacchari, 3ij;
Aque, Oij.

Dissolve.

Employed in the treatment of atonic and fungous ulcers.

CAUSTIC SODA.

The same properties as the caustic potassa. Not much employed.

EXTERNALLY.

Pommade employed in Tinea. H. St. L.

Rx. Sodæ causticæ,
Sulphatis potassæ, ā ā 3ij;
Adipis, 3ij.

Reduce the soda and the sulphate, and incorporate them with the lard.

Employed in frictions on the diseased head, after the scabs have been removed by means of

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cataplasms, and the hair cut short; the head should then be covered with blotting paper.

PROTONITRATE OF MERCURY.

A very energetic caustic; employed in tetters, cancerous ulcerations of the skin, and even those of the neck and of the breast.

Solution of the Protonitrate of Mercury. H. St. L.

Rx. Hydrarg. proto-nitratis, 3j;
Acidi nitrici, 3 viij.

Dissolve.

It is applied by means of a small brush, and the part cauterized covered with lint which has been also imbibed with the caustic.

CHLORIDE OF ANTIMONY (BUTTER OF ANTIMONY).

A caustic, whose action is prompt and energetic. It is often employed to cauterize narrow and sinuous wounds, such as the bites of enraged animals.

It is applied by means of a camel's hair pencil, or by lint. Care should be taken to absorb the blood before it is applied, as that liquid rapidly decomposes it.

THE IMPURE ACETATE OF COPPER—VERDIGRIS.

A caustic, employed to suppress fungous flesh, and to destroy syphilitic excrescences, &c.

EXTERNALLY. The surface of the wound should be sprinkled with a small quantity of this substance.

Onguent égyptiac. P. To dress fungous ulcers.

The NITRATE OF SILVER, the WHITE OXIDE OF ARSENIC, the SULPHATE OF COPPER, the RED OXIDE OF MERCURY, SOLUTION OF AMMONIA, and the MINERAL ACIDS, act as violent caustics. We have already mentioned, in the foregoing chapters, other effects on the economy.

The same may be said of the rubefacient and epispastic substances, of which the most common in use are—CANTHARIDES, BLACK MUSTARD-SEEDS, TATRATE OF ANTIMONY, CROTON OIL, &c. &c.

CHAPTER XVII.

MEDICINES GENERALLY EMPLOYED AS ANTHELMINTICS.

POMEGRANATE (BARK OF THE ROOT).

Astringent and anthelmintic. Very much employed in tænia, and with much success.

INTERNALLY.

Anthelmintic Decoction.

Rx. Cort. rad. puniceæ granati, 3ij;
Aque, Oij.

Macera per horas xxiv, coque ad Oj, cola et adde,

Syrupi menthæ, 3j.

M M

To be taken at three doses, half an hour's interval between each dose.

This decoction is employed with much success in tænia. A purgative potion should be administered the evening before taking it. The first or second dose sometimes occasions vomiting; but this circumstance should not prevent administering the third, which will not produce this effect. If the tænia is not entirely expelled, a similar preparation should be given the following day.

Some practitioners prefer giving for two or three mornings two glasses of a weaker decoction, composed of twelve drachms of the bark boiled for half an hour in three pints of water. In this case it is necessary to administer a purgative immediately after.

Tincture of Filix Mas. Peschier.

Rx. Folior, filicis maris, ʒ ij;

Etheris sulphurici, q. s.

Macerate per aliquot tempus, dein cola.

Dose, mʒij—xxx in pills, with an extract.

EXTERNALLY. *Eacha.* ʒ ij in Oj of water.

This decoction is used at la Charité.

MOUSSE DE CORSE (HELMINTHOCORTON).

A mixture of animal and vegetable substances, fuci, ulvæ, conservæ, corallinæ, &c.

INTERNALLY. Gr. x—ʒ ij. *Infusion*, ʒ ij—Oj of water.

CORALLINE.

This substance appears to act as a vermifuge, on account of the sea weed with which it is mixed, and the saline matter with which it is impregnated. Nevertheless, it is often employed with success in cases of lumbrici.

INTERNALLY. *Powder*, ʒj—ʒ j.

Infusion. ʒ j—ʒ j in Oj of water.

Anthelmintic Powder.

Rx. Corallinæ (de corse),

Artemesie contræ, ā ā ʒ iij;

Hydrar. submur., ʒj.

Divide in chartulas octo quotidie sumendas.

Decoction of Coralline. Hôt. D. H. de la Ch.

Rx. Corallinæ, ʒ j;

Aquæ, Oij.

Decoque et cola.

A glassful at a dose.

Vermifuge Potion. H. de la Mat.

Rx. Corallinæ, ʒ iv;

Aquæ ferventis, ʒ vj.

Macerate, cola et adjice,

Syrupi mellis, ʒ j.

M. For a dose.

TIN.

An anthelmintic, not much employed at the present day.

INTERNALLY. *Powder*, or *Filings*. P. ʒ ss—j, incorporated in honey or syrup.

Vermifuge Powder. H. of Germ.

Rx. Stanni, ʒ ij;

Sulphatis ferri, gr. v.

Misce et divide in chartulas six, quarum capiat unam secundâ quâque horâ.

Vermifuge Electuary. H. de la Ch.

Rx. Stanni pulv., ʒ j;

Ext. artemesie vulg.,

Pulveris jalapæ, ā ā ʒ j;

Syrupi cichorii, q. s.

Divide in bolos xij vel xv, quorum capiat unum singulâ semihoræ.

SEMEN CONTRA-TARTARIAN SOUTHERN-WOOD.

Rather an energetic anthelmintic, principally employed to destroy lumbricoides and ascarides.

INTERNALLY. *Powder.* Gr. xx—ʒ ij, incorporated with honey.

Infusion. ʒ ij—iij in water, wine, or milk.

Vermifuge Powder. H. of Germ.

Rx. Artemesie santonicæ, ʒ ss;

Potassæ tartratis, ʒ iij;

Sacchari, ʒ ij.

Divide in chartulas xvi, quarum capiat unam tertiâ vel quartâ quâque horâ.

Vermifuge Boluses. H. de Paris.

Rx. Artemesie santonicæ, ʒj;

Submuriatis hydrargyri, gr. vj;

Camphoræ, gr. xvij;

Syrupi simplicis, q. s.

Divide in bolos iij, quorum sumat unum vel duos quotidie.

Anthelmintic Boluses. H. Militaires.

Rx. Artemesie santonicæ, gr. x;

Hydrargyri submur., gr. ij;

Mellis, q. s.

Fiat bolus.

Decoction of Tartarian Southernwood. Hôt. D.

Rx. Artemesie santonicæ, ʒ ss;

Aquæ ferventis, Oij.

Decoque et cola.

A cupful at a dose.

Anthelmintic Fotion. H. of Italy.

Rx. Artemesie santonicæ, ʒ j;

Pulveris rhei, ʒ ij;

Aquæ ferventis, ʒ viij.

Coque ad ʒ vj, cola et adde,

Syrupi cichorii, ʒ j.

Divide in doses duas.

The *Especies Anthelmintiques* are composed of—

Dried flowers of tansey,

———— abisinth,

———— chamomile.

The infusion is prepared from ʒ j to Oij of boiling water.

FINIS.

—o—

Reviews.

Encyclographie des Sciences Medicales, Repertoire Generale de ces Sciences au 19eme Siecle: Bruxelles. Encyclography of the Medical Sciences, and General Repertory of those Sciences in the 19th Century. Vol. I.—ABA—ADU. Brussels.

If the present rage for dictionaries, encyclopedias, encyclographies, and other compact masses of information goes on, the bibliopoliſts will assuredly be under the necessity of shutting shop. Instead of the formal, parliamentary (in pomp we mean), post octavo, with hugely-ledged lines, and margin as broad as the Humber, we have now the close typed, closely lined, double-columned page, with scarcely margin enough on which to scratch the literal errata, or mark an extract by a pencil line. Then, as to price, if it be pleasure to find ourselves sailing rapidly through three whole volumes of the former race of books, and to deceive ourselves thereby into the belief of extensive reading, yet, as in the case of most pleasures, we pay dearly for it; for, are not three volumes post octavo sold for 11. 11s. 6d.? And can we not have a fasciculus of some cyclopedia for much less, though it contain much more? True, it behoves us to mount our spectacles on nose to con the small letter-press; true, the close writing begets close reading, and compels us to endue the garment of attention, which to many is like the shirt of Nessus to Hercules—consumedly troublesome: true, so glorious a shew of books does not

“Cram the creaking shelves;”

but what of that and more than that? It is not what cometh in but what goeth out that defileth the softness and purity of a man's temper; and shall not our minds be infinitely more placid in withdrawing, with a sigh, seven or nine shillings from the pocket, than in voiding, with a groan four times that amount? “Alas!” exclaim the booksellers, “medical men have ceased to read; none of them buy books now.” Right, messieurs les libraires, but we read a book, and a book that contains a score of such books as you desire to publish: though you sell only one book, we read twenty; though you lose per centum we gain per caput. Therefore, long live the encyclopedists, the

encyclographists, the lexicographers, and the whole race of beneficent genii, who spare our pockets and furnish our attics at a small cost!

But “to turn to something of more serious mood,” we have to tell our readers that the present work is one of real merit. It professes to be a reprint of the *Dictionnaire de Medecine et de Chirurgie Pratiques*, and the second edition of the *Dictionnaire de Medecine* of the Parisian press, in the compilation of which, the first names of French medical literature are included. The object of the editors, in making this double choice, would appear to be to conciliate readers of both the doctrines that have been contending for the supremacy in France; for, though in the prospectus we are told that, “in reprinting the *Dictionnaire de Medecine et de Chirurgie Pratiques*, they appear to hoist the banner of the physiological doctrine, whilst in giving a preference to the *Dictionnaire de Medecine*, they proclaim the superiority of eclectism, and that such is not their aim,” yet it is afterwards stated, “that it has been left to the physician himself to judge between and appreciate the opinions advanced on both sides”—hence the choice of the two works in question.

Those, therefore, of our readers who have had the opportunity of ascertaining the merits of the French works, will also be *au même* of passing judgment on this junction of the two. It is not merely a reprint, however; the remarks of the Belgian editors are interspersed, and moreover, the articles on the same subject from the two French works are ingeniously bound together, so as to form a whole from which facts and opinions of various shades may be drawn. There must be also some condensation, otherwise the articles comprised in the alphabetical range which heads this notice, could scarcely have been included in 316 pages of letter-press, close and double-columned though it be.

An important feature also is the list of authorities that terminates each subject treated of. In the preface great credit is taken for this, and more especially for the introduction of modern authors into the list: we give the editors the same credit, but must also remark, that had a greater number of

names of the olden time been cited, we should have been better satisfied. Neither French nor Belgian are, however, *au fait* of the ancient authors: the English are somewhat more so; but the Germans put all the three to the blush, when pitted on that score. The bibliographical references are in this work remarkably well managed; thus, instead of under the head "Abdomen," collecting all the authorities on the anatomy, physiology, and pathology of that region at the end of the article, those on the normal anatomy are placed after the description of that part of the study of the cavity in question; those on the morbid anatomy in their place; on the pathology of the various parts included in the region, under those parts, and so on; rendering a reference at once easy and clear.

It can scarcely be expected that we should extract from this voluminous publication; nor is condensation a very easy operation. If our readers will take our word for it, however, without requiring a specimen of the manner of treating the subjects, we can conscientiously recommend that manner to them. We also venture to prophesy that this publication as it proceeds will obtain a prominent place among the collections of medical writings now in progress in the various European countries. The articles in the present volume, to which attention is more particularly worthy, are Abscess, Abdomen, Absorption, and Accouchement.

We shall notice the succeeding volumes as they proceed from the press.

—o—

The Epidemics of the Middle Ages. From the German of J. F. C. Hecker, M.D., Professor at Frederick William's University at Berlin. Translated by G. B. Babington, M.D. F.R.S. London: 1835. 12mo. pp. 206.

ALTHOUGH it be admitted that the attention of the practitioner ought to be chiefly directed to the diagnosis and treatment of disease as presented to him in his own experience, still we should be taking a very imperfect view of the scope and bearing of medical science if we were to regard as useless the retrospect of its past history. The records of epidemics which have infested former generations, afford useful data to the medical philosopher; and even the details of opinions now acknow-

ledged to be erroneous, and of practice which has become obsolete, throw important light on the progress of human intelligence, and the steps by which the art we profess advances towards perfection.

Many of our readers have no doubt perused with interest the first part of the work whose concluding portion is now before us. The epidemics here described are of a less fearful character than the gloomy pestilence which swept away so large a proportion of the human race; they include the various morbid saltations which have at different times afflicted the sons of men.

In the first chapter is an account of St. John's or St. Vitus's dance. The earliest visitation of this kind mentioned by our author occurred in the year 1027, near the convent Church of Kolbig, in the neighbourhood of Bernburg.

"According to an oft repeated tradition, eighteen peasants, some of whose names are still preserved, are said to have disturbed divine service on Christmas eve, by dancing and brawling in the churchyard, whereupon the priest, Ruprecht, inflicted a curse upon them, that they should dance and scream for a whole year without ceasing. This curse is stated to have been completely fulfilled, so that the unfortunate sufferers at length sunk knee deep into the earth, and remained the whole time without nourishment, until they were finally released by the intercession of two pious bishops. It is said, that upon this, they fell into a deep sleep, which lasted three days, and that four of them died; the rest continuing to suffer all their lives from a trembling of their limbs."

In the year 1237, a hundred children were seized with a dancing malady; and in 1278 two hundred fanatics took to capering upon a bridge at Utrecht, and ceased not their orgies till a priest passed with the host, on the appearance of which the bridge gave way, and the unhappy votaries of Terpsichore were all drowned.

But the grand eruption of the dancing plague took place in 1374.

"The effects of the *Black Death* had not yet subsided, and the graves of millions of its victims were scarcely closed, when a strange delusion occurred in Germany, which took possession of the minds of men, and, in spite of the divinity of our nature, hurried away body and soul into the magic circle of hellish superstition. It was a convulsion which in the most extraordinary manner infuriated the human frame, and excited the astonishment of contemporaries for more than

two centuries, since which time it has never reappeared. It was called the dance of St. John or of St. Vitus, on account of the Bacchantic leaps by which it was characterised, and which gave to those affected, whilst performing their wild dance, and screaming and foaming with fury, all the appearance of persons possessed. It did not remain confined to particular localities, but was propagated by the sight of the sufferers, like a demoniacal epidemic, over the whole of Germany, and the neighbouring countries to the north-west, which were already prepared for its reception by the prevailing opinions of the times.

“So early as the year 1374, assemblages of men and women were seen at Aix la Chapelle who had come out of Germany, and who, united by one common delusion, exhibited to the public both in the streets and in the churches the following strange spectacle. They formed circles hand in hand, and appearing to have lost all control over their senses, continued dancing, regardless of the bystanders, for hours together in wild delirium, until at length they fell to the ground in a state of exhaustion. They then complained of extreme oppression, and groaned as if in the agonies of death, until they were swathed in cloths bound tightly round their waists, on which they again recovered, and remained free from complaint until the next attack. This practice of swathing was resorted to on account of the tympany which followed these spasmodic ravings, but patients were frequently relieved in a less artificial manner, by thumping and trampling upon the parts affected. While dancing they neither saw nor heard, being insensible to external impressions through the senses, but were haunted by visions, their fancies conjuring up spirits whose names they shrieked out; and some of them afterwards asserted that they felt as if they had been immersed in a stream of blood, which obliged them to leap so high. Others, during the paroxysm saw the heavens open and the Saviour enthroned with the Virgin Mary, as indeed the religious notions of the age were strangely and variously reflected in their imaginations.

“Many who were seized at the sight of those affected, excited attention at first by their confused and absurd behaviour, and then by their constantly following the swarms of dancers. These were seen day and night passing through the streets, accompanied by musicians playing on bagpipes, and by innumerable spectators attracted by curiosity, to which were added anxious parents and relations, who came to look after those among the misguided multitude who belonged to their respective families. Imposture and profligacy played their part in this city also, but the morbid delusion itself seems to have predominated. On this account religion could only bring provisional aid, and therefore the town-council benevolently took an interest in

the afflicted. They divided them into separate parties, to each of which they appointed responsible superintendents to protect them from harm, and perhaps also to restrain their turbulence. They were thus conducted on foot and in carriages to the chapels of St. Vitus, near Zabern and Rotstein, where priests were in attendance to work upon their misguided minds by masses and other religious ceremonies. After divine worship was completed, they were led in solemn procession to the altar, where they made some small offering of alms, and where it is probable that many were, through the influence of devotion and the sanctity of the place, cured of this lamentable aberration. It is worthy of observation, at all events, that the dancing mania did not recommence at the altars of the saint, and that from him alone assistance was implored, and through his miraculous interposition a cure was expected, which was beyond the reach of human skill.”

This uproarious epidemy seems gradually to have become less frequent, and finally extinct, unless the disease now called *chorea* is to be regarded as a degenerate offspring which follows its parent *non passibus equis*.

Dr. Hecker takes an ingenious view of the probable moral and physical causes of this strange distemper, and observes, in reference to its pathology, that “the bowels, which in many were debilitated by hunger and bad food, were precisely the parts which in most cases were affected with excruciating pain; the tympanitic state of the intestines points out to the intelligent physician an origin of the disorder, which is well worth consideration.”

The second chapter treats of *tarantism*—the dancing disease of Italy, supposed to arise from the bite of the tarantula.

“Those who were bitten, generally fell into a state of melancholy, and appeared to be stupified, and scarcely in possession of their senses. This condition was, in many cases, united with so great a sensibility to music, that, at the very first tones of their favourite melodies, they sprang up, shouting for joy, and danced on without intermission, until they sank to the ground exhausted and almost lifeless. In others, the disease did not take this cheerful turn. They wept constantly, and as if pining away with some unsatisfied desire, spent their days in the greatest misery and anxiety. Others, again, in morbid fits of love, cast their longing looks on women, and instances of death are recorded which are said to have occurred under a paroxysm of either laughing or weeping.”

This disease began in Apulia, where *tarantula* is common: towards the clos

the fifteenth century it had extended into other parts of Italy, and an universal *arachniphobia* prevailed.

"Nothing short of death itself was expected from the wound which these insects inflicted, and if those who were bitten escaped with their lives, they were said to be seen pining away in a desponding state of lassitude. Many became weak-sighted or hard of hearing, some lost the power of speech, and all were insensible to ordinary causes of excitement. Nothing but the flute or the cithern afforded them relief. At their sounds they awoke as it were by enchantment, opened their eyes, and moving slowly at first, according to the measure of the music, were, as the time quickened, gradually hurried on to the most passionate dance. It was generally observable that country people, who were rude, and ignorant of music, evinced on these occasions an unusual degree of grace, as if they had been well practised in elegant movements of the body; for it is a peculiarity in nervous disorders of this kind, that the organs of motion are in an altered condition, and are completely under the control of the overstrained spirits. Cities and villages alike resounded throughout the summer season with the notes of flutes, clarinets, and Turkish drums; and patients were every where to be met with who looked to dancing as their only remedy. Alexander ab Alexandro, who gives this account, saw a young man in a remote village who was seized with a violent attack of tarantism. He listened with eagerness and a fixed stare to the sound of a drum, and his graceful movements gradually became more and more violent, until his dancing was converted into a succession of frantic leaps, which required the utmost exertion of his whole strength. In the midst of this overstrained exertion of mind and body the music suddenly ceased, and he immediately fell powerless to the ground, where he lay senseless and motionless until its magical effect again aroused him to a renewal of his impassioned performances.

"At the period of which we are treating there was a general conviction, that by music and dancing the poison of the tarantula was distributed over the whole body, and expelled through the skin, but that if there remained the slightest vestige of it in the vessels, this became a permanent germ of the disorder, so that the dancing fits might again and again be excited *ad infinitum* by music. This belief, which resembled the delusion of those insane persons, who, being by artful management freed from the imagined causes of their sufferings, are but for a short time released from their false notions, was not entertained without the most injurious effects: for in consequence of it, those affected necessarily became by degrees convinced of the incurable nature of their disorder. They expected relief indeed, but not a cure, from music;

and when the heat of summer awakened a recollection of the dances of the preceding year, they, like the St. Vitus's dancers of the same period before St. Vitus's day, again grew dejected and misanthropic, until, by music and dancing, they dispelled the melancholy which had become with them a kind of sensual enjoyment."

The third chapter is on the *tigretier*, or dancing mania of Abyssinia, and in the fourth are some interesting remarks on the effects of sympathy and imitation in the production of nervous diseases. There is an appendix containing some curious excerpts from old German works, and eight specimens of the music to which the *tarantati* were wont to dance.

On the whole, this little volume is a very interesting contribution to medical literature, and the profession here are much indebted to Dr. Babington for presenting it to them in an English dress.

Foreign Medicine.

Chemical Composition of Articular Concretions.

GUYTON and FOURCROY, in 1782, asserted that the composition of gouty concretions was principally phosphate of lime. Subsequently, in 1797, Dr. WOLLASTON shewed that urate of soda was the chief component of these concretions, and such has been the general belief since his time. Very lately, however, M. LASSAIGNE has been induced to deny this exclusive analysis, from having examined two stones that were extracted from the knee of a man of 70 years of age. These he found to contain

Animal matter soluble in boiling water	37,2
Sub-phosphate of lime	49,9
Carbonate of lime	12,9
	100,0

Journal de Pharmacie.

Total absence of the Genitals—Exit of the Urine by the Umbilicus—Displacement of the Anus.

Pierre Louis VALLEE, aged ten years, exhibited the following appearances:—

Ordinary size of body, fresh complexion, slight squint, total want of the genital organs, perforation of the abdomen for the exit of the urine. Instead of being in the centre of the abdomen, the umbilicus is in the lower portion of it, from 1 to 4 lines above the pubis, the space between the pubis and sternum being 8 inches 9 lines. The umbilicus is a triangular depression, 1 inch 6 lines large: in this depression two tumours, or rather fleshy excrescences exist; one nearly the size of a hazel nut is irregularly round and covered with a reddish skin, the other smaller and divided into three

parts by fissures. These three divisions appear to be rather recent fleshy growths than integuments long exposed to the air: such, however, is not the case. From each side of the latter tumour there is a cleft, out of which the urine is continually dribbling. On the mons veneris the skin is rough and uneven. The arch of the pubis is scarcely distinguishable, either on account of its non-existence or because the patient prevents a full examination, for he complains greatly of being touched in those parts. The iliac foramen is filled with a large tumour, formed by an intestinal hernia: if it be pressed the urine flows more freely; on the opposite side there is also a tumour which appears to be formed by fatty tissue.

Between the summit of the umbilical triangle alluded to and the anus, there is only a space of 2 inches 6 lines. The anus is exceedingly narrow, and appears to have a slightly developed sphincter. From it there is a cleft which separates the buttocks; from the coccyx to the anus the space is 3 inches 4 lines, and the cleft along it is very deep.

The parents of this child are of a sallow complexion, and remarkably thin; their other children are of scrofulous constitution: the youngest has an umbilical hernia.

As this child increased in age he slept less, his appetite meantime augmenting in an extraordinary manner. At present he eats nearly three pounds and a half of bread in the day; his stomach is always craving, though after each meal he suffers pain in it.

In consequence of the extreme sensibility of the edges of the clefts that give issue to the urine, it has been impossible to ascertain the depth and extent of the organ containing it. The fæces are very frequently voided, and are seldom felt on such occasions. The recumbent posture being painful to the child, he generally remains seated in bed, and as his head nods backwards and forwards, he frequently knocks it against the posts, which he says relieves the colicky pains he so often has at night. He walks with difficulty, and cannot run at all; the power of the right arm and leg is almost lost. His intellect is exceedingly precocious, and his sensitiveness of mind often obliges him to desire death.

In the above case there has evidently been an arrestation of development, the anterior parietes of the bladder being wanting, constituting what is called exstropion of the bladder. The child most probably belongs to the female sex, but whether there is a womb within or not, is of course uncertain. The hernia of the left side would appear to be formed by the rectum, which instead of descending into the pelvis, seems to pass immediately below the urinary organ, and turning at a right angle, to end just below the pelvis.—*Gazette Medicale*, May 2.

Acute Myelitis confined to the posterior half of the Spinal Marrow: general Opisthotonos.
By Dr. Marco Paoloni.

The following case, extracted from the *Bulletino delle Scienze Mediche della Societa Medica-chirurgica di Bologna*, for June, 1834, shews that general opisthotonos sometimes depends on inflammation of the posterior or cerebellic cords of the spinal marrow, the brain remaining unchanged.

A strong man in the flower of his age entered the hospital of St. Ursula, for a double hydrocele of the tunica vaginalis, consequent on a gonorrhœal orchitis. On the right side a palliative treatment was put in practice, and on the left, where the tumour was of older date and larger, the radical cure was attempted. In doing this, besides an extensive incision of the tunica vaginalis, it was necessary to excise a portion of the membrane. No fever ensued for the two following days. On the third, however, an intense one sprung up, with lancinating pains of the wound, delirium, and distressing sensation along the vertebral column. The contro-stimulant method immediately employed subdued in some degree the fever, and the lancinating pains diminished. This amelioration was accompanied with the sloughing of an extensive angrenous eschar that had invaded the cellular tissue around the testicle, the tunica vaginalis, and internal surface of the scrotum.

On the seventh day after the operation, when the wound was kindly granulating, and the general inflammatory phenomena were almost entirely subdued, the patient became sensible of some difficulty in moving the jaw, and a slight stiffness of the posterior muscles of the throat, described by himself as if a cord was drawing him backwards. The trismus became complete; the rigidity extended to the muscles of the trunk, which bent the body backwards, and as it proceeded to the legs, they also became in a state of forced extension, and even somewhat bent backwards. Deglutition was impossible, the respiration difficult, the belly was meteorized, the bowels bound, the skin hot and covered with a copious viscid sweat; the pulse vibrating and feverish. Bleedings, which shewed a buffy coat, repeated applications of leeches along the sides of the vertebral column, purgative clysters, and hot fomentations, all failed in warding off his death, which took place at the end of three days.

Dissection, Twenty-four Hours after Death.
—Except a slight venous injection, the meninges of the brain were sound. The brain, cerebellum, and medulla oblongata were also sound in all points. The whole posterior surface of the vertebral dura mater was of a dark red colour, particularly at the cervical and lumbar regions; this colour was altogether absent from the anterior surface. The arachnoid was strongly injected: a great quantity of serosity floated between the

two membranes, especially at the points above mentioned. After withdrawing the pia mater, the whole posterior surface of the spinal cord was seen to be palpably softened: in the cervical and lumbar regions it was almost diffuent. This softening was circumscribed in a very remarkable manner at the posterior part of the cord, while the whole of the anterior surface retained its consistence, colour, and other characters in a normal condition. A distinct line of demarcation existed between the diseased and healthy portions. The posterior roots of the spinal cord participated in the morbid changes.

In the genital organs all the constituents of the spermatic cord were found strongly adhering together, and the spermatic vessels were gorged with blood. Great difficulty was experienced in separating the vas deferens from two nervous branches, which being of a deep red colour, that could not be removed by repeated washings, may be considered to have been inflamed. The strong adhesions of the spermatic cord about the inguinal ring prevented the possibility of tracing these two nerves into the abdomen. Neither of the testicles were altered in texture.

The thoracic and abdominal viscera were normal; only the lungs were slightly congested.

This case proves that an affection of the posterior cords of the spinal marrow produces forced extension of the whole body. The following case will prove that inflammation of the cerebral hemispheres, on the contrary, produces forced flexion of the body; and both cases tend to demonstrate the justness of Bellingieri's views on the "nervous antagonism."

Meningitis of the Cerebral Hemispheres, with Emprosthotonos. By Dr. Francis Morotti.

Joseph Bianca, aged 12 years, and enjoying habitually good health, fell asleep, after hard labour, with his head bare and exposed to the heat of the noon-day sun. On awaking he felt himself unwell, and as he got daily worse, he entered, three days afterwards, the hospital of Vercelli. The symptoms then were—almost total blindness and deafness; continued coma, only interrupted by low feeble groans; countenance sunk; squinting; spasmodic closing of the eyelids of the right eye; the trunk of the body strongly bent forwards; the limbs bent, and when any attempt was made to extend them he disclosed the pain he experienced by groans; the pulse hard and small.

Notwithstanding copious bleedings and alvine evacuations the symptoms persisted all the following day and then became worse. In the evening he died in the midst of excruciating tortures.

Dissection, Twenty-four Hours after Death.—Considerable injection of the cranial, dura, and pia mater; the sinuses gorged with blood containing a quantity of sero-purulent

fluid, which was also abundant in the sufractuositities of the cortical and the base of the cerebral lobes. On cutting the white substance the blood vessels were seen in a gorged state. Neither the cerebellum nor spinal cord were changed. The inflammation extended over the whole exterior surface of the cerebral lobes, but was more marked on the right side: it was this side that had been exposed to the sun while the boy was sleeping.

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*The London Medical
AND
Surgical Journal.*

Saturday, May 23d, 1835.

THE HUNTERIAN MUSEUM.

WE have so often committed violent assaults upon the *twenty-two* of Lincoln's Inn, that when we express a wish to hold amicable converse with them touching a matter of great interest to science, we suppose they will not give us credit for sincerity. We do assure them, however, that our present intentions are entirely pacific; that the observations we are about to make, have no tendency to swamp the council with general practitioners—none to subvert the much-loved certificate system—none to contaminate the purity of mechanical surgery with the slightest tincture of medical knowledge. We have a favour to ask, the concession of which cannot possibly do them any harm, and will confer an infinite benefit on the rest of the profession: it is something which, as members of the College, we have an unquestionable right to demand—something which we have vehemently demanded before, and which, when the fit of politeness that has seized us at present has passed off, we shall again demand with an uncompromising sturdiness.

"Not fierce Othello in a louder strain,
Roar'd for the handkerchief that caused his pain."

Our request is, that the Hunterian Museum may be made available for the purposes of study.

The importance of comparative ana-

tomy and physiology, always recognised by medical philosophers, is now beginning to be generally acknowledged. For the cultivation of this magnificent pursuit, there are within the walls of the College of Surgeons materials not elsewhere to be found on earth. Even the celebrated collection of Cuvier is absolutely a trifle compared to that of Hunter.

It is impossible to view the latter with an understanding eye, without being lost in admiration at the amplitude of mind which could form, and the gigantic labour which could embody, so vast a conception. Unlike most other great works in science, it is no less an evidence of the splendid imagination, than of the vigorous reason of its author; as a fabric of natural truth it is one of the noblest efforts of philosophy; as a shadowing forth of divine power in creation, it is one of the sublimest visions of the human imagination.

And this monument of the finest intellect that ever adorned the annals of our art, this exhaustless mine of knowledge and of pleasure, is so jealously guarded as to be almost useless—it is a mere exhibition!

When is it open to the profession? Three days only in the week, between the hours of ten and four; that is, when it is impossible for gentlemen engaged in practice to resort thither. Another evil, though of less importance, is, that the gallery and the lower part of the museum are not accessible at the same time, so that many objects necessarily connected in science cannot be studied together; we have ourselves frequently desired to compare objects in different parts of the museum, and have been unable to do so on account of the arrangement above mentioned. What preposterous whim has led to such an arrangement we cannot tell.

In animadverting on these abuses, we beg leave expressly to exempt from all censure the two gentlemen who immediately superintend the museum: as far

as they are concerned, every facility is afforded to visitors; and all who address themselves to Mr. Clift or Mr. Owen, will be ready to acknowledge both the great extent of their information, and their polite and obliging manner of communicating it.

Such is the manner in which an important trust, reposed by government in the College of Surgeons, is fulfilled by the council. We will not now dwell on the fact that this grand collection remained for years a chaos for want of explanatory catalogues; nor on the fact that there are many pathological preparations, the history of which is known only to one individual—Mr. Clift, and which in the event of his death would have become useless and unmeaning. We will not dwell on these things, because the council, thanks to the *Lancet*, are now using all diligence to supply these deficiencies, and have confided the construction of catalogues to gentlemen who have already given very satisfactory proofs of their zeal and ability.

We conclude by entreating the council to let the museum be open all day and every day, and to let the whole of it be accessible at the same time—a very reasonable request, and very civilly made; which if they do not comply with at the re-opening of the College, we will lead them such a life that they shall wish the *London Medical and Surgical Journal* at the bottom of the deep sea.

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NEW REGULATIONS OF THE APOTHECARIES' COMPANY.

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WE have received numerous strictures on the new regulations of the Apothecaries' Company, and many complaints of the expense which they will heap on those apprentices, who cannot commence their medical studies before October next. We agree with our correspondents, that these regulations were too suddenly framed, and are oppressive and unjust towards those who entered the profession with pecuniary

means sufficient to enable them to obtain a qualification on the conditions that obtained when they were apprenticed. Had the legislators at the Hall proposed such regulations twenty years ago, and that in five years from that time, they should be complied with, there would be no just ground for complaint. But no, the rhabarbarians were blundering, year after year, with new regulations; and when on the eve of annihilation, they fruitlessly attempt to ward off the blow intended for them by the legislature, by framing a code of regulations according to the recommendations of the most eminent members of the profession, before parliament. They suddenly increase the expense of medical education, regardless of the means of a majority who expected it on more moderate terms. The Solons of the Hall cannot scarcely expect that the professors of the different branches of medical science, should give double the number of lectures, and for double the present period, for the present remuneration. It is to be recollected that most of the teachers in London and throughout the empire, are actively engaged in public and private practice, while some of them are solely dependent on teaching; and yet it is proposed that they shall devote double the length of time for the same remuneration they receive at present for half the period. According to this logic, the examiners at the Hall are bound to examine for double the time they now do for their present remuneration. It is not, however, stated in their manifesto, that they intend any such thing. They, considerate mortals, say to professors, and the medical officers of hospitals and dispensaries, we expect you will allow students to attend your instructions for double the present curriculum on the present terms. Whether this modest proposal will be received by the teachers, remains to be proved; and should it be declined, which is most likely, students will have to thank the rhabarbarians for a longer pull at their purses.

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Hospital Reports.

WESTMINSTER HOSPITAL.

Medullary Sarcoma of the Liver and Aortic Lymphatic Glands, Tubercles of the Lungs, Spleen, Bronchial Glands, &c.

THOMAS YEARN, aged 31, was admitted under the care of Mr. White, March 25th,

1835, having been long ill with a tumour of the liver. He had lived as servant in a gentleman's family, and it appears that he has uniformly been of temperate habits. The disease had of late proceeded rapidly, despite all the treatment employed by his medical attendants; and pulmonary consumption having become developed in addition, and threatening a speedy fatal termination, he was received into the hospital, with the view rather of adding to his comforts, than to any particular treatment.

The tumour in the abdomen was very evident in the right hypochondriac region, reaching almost to the umbilicus, and it was a matter of doubt in the diagnosis, whether this depended upon a chronic abscess in the organ, or on some new formation. The auscultation of the thorax, in relation to the lungs, gave puerile respiration, mucous rattle, and bronchophony over the surface of the chest in general; with the exception of the clavicular and interscapular regions, where the respiratory murmur was deficient, and in the same regions the sound was dull on percussion, being clear in the remaining parts of the chest. What was remarkable, the action of the heart, as indicated by its sound and impulse, was not perceptible in the præcordial region, and the patient stated that he has not for long been able to distinguish it himself.

Since his admission into the hospital, he has obviously declined daily, the expectoration becoming more profuse, and the hectic symptoms more severe, and on the 5th inst. he died with no other symptoms than those of exhaustion, rendering him incapable to expectorate the frothy mucus, which had accumulated in the air passages.

Inspection of the Body, Thirty Hours after Death.—A white, ragged, and deeply excavated ulcer was found on the mucous membrane of the back of the pharynx, which had been noticed during life, and might have been taken for one of syphilitic origin. The larynx, trachea, and bronchi, contained a large quantity of frothy mucus, such as had been expectorated during life. The mucous membrane lining these tubes was considerably inflamed. Upon raising the sternum and cartilages of the ribs there was found at the point of articulation on the right side, and growing either from the costal cartilages, or their pericondrium, a morbid growth of an irregular and flattened oval shape, of the size of a large egg, of a dense cartilaginous-like structure, and of a yellowish white hue.

On the right side there were very general adhesions of the pleura, not of a very recent date. Externally, the lungs appeared very healthy and crepitated, throughout the greater part of their extent. The same was found to be the case upon cutting into them, with the exception of their being engorged with a quantity of frothy mucus, and that some of the air-cells were somewhat dilated.

Both lungs, however, and more especially the right, in the situation of their roots and apices, were studded with tubercles in various degrees of development, some having become merely softened, and the cysts of others having become evacuated. The tissue of the lung surrounding the tubercles was in the condition of sanguineous engorgement, and in some places apparently hedatized. In the apex of the left lung the tubercles were arranged in the form of concentric circles, the outer circle having a diameter of about an inch and a half, the surrounding lung being somewhat consolidated, but only slightly sprinkled with tubercles. Some of the bronchial glands were considerably enlarged, from the presence of numerous tubercles. One of the œsophageal glands was converted into a dense hard tumour, which presented a smooth regular surface when divided, and was beautifully mottled with green, white, and grey.

The heart was somewhat diminished in size, and flabby, being, if anything, smaller than the fist of the individual, who, however, it must be remembered, was highly emaciated. Its walls were in good proportion, and its valves healthy.

In the abdomen the liver was found extending beyond the cartilaginous margin of the thorax, and encroaching upon the epigastric and chondriac regions. Its convex surface was lobulated, from the presence of some subjacent tumours, which existed in two or three places.

On cutting into the liver there were found three or four roundish masses, one larger than an orange, in the right lobe, and the others smaller, in the left. The substance of these tumours was tolerably firm, resisting, and lardaceous, and of a white colour, having a tinge of yellow. The substance of the liver in which these tumours were embedded, was tolerably healthy. The aortic lymphatic glands, seated around the cæliac axis, were converted into a tissue closely resembling that of the hepatic tumours, and constituted a large lobulated mass just above the pancreas, which, however, was not itself affected. The spleen contained many yellowish scrofulous tubercles, and was larger and softer than natural. The kidneys were healthy. The mucous membrane of the stomach was of a somewhat increased degree of redness.

MEDICOBOTANICAL SOCIETY OF LONDON.

Tuesday May 12th, 1835.

Thomas Everitt Esq. in the chair.

DR. SIGMOND, the senior secretary to the Society, read a letter from Dr. Mones, the Professor of Toxicology, apologising for his absence and inability to deliver his introductory lecture.

Dr. Sigmond then observed, that he

would deliver a lecture on the subject, which he did with very great credit.

Mr. Allsop, a chemist at Chelsea then introduced a new minim glass, the value of which will be perceptible from the following particulars.

The Syringe Minim Meter or improved Drop Measure.—This useful little instrument, being graduated so as to measure with great accuracy to a single minim, is calculated to render the use of the more powerful medicines both convenient and safe. In the administration of prussic acid, laudanum, &c. perfect accuracy cannot be attained by the measures hitherto in use; and this may therefore be considered indispensable, not only to apothecaries and chemists, but also to accompany the medicine chest in private families. The entire uncertainty attendant upon the use of medicines by drops, will be shown by the following statement of experiments made for the purpose with various fluids, and dropped from bottles of different sizes to show the two extremes; from which it appears that drops may vary in size, *from less than half a minim to six times that quantity.*

Number of drops required to measure a drachm.

From a large bottle.	Ditto small.
Of dilute sulphuric acid . . . 24 drops .	84 drops.
—Prussic acid (Scheele's) 35	70 ———
—Distilled water 38	54 ———
—Liquid ammonia 40	48 ———
—Laudanum 84	135 ———
—Rectified spirit 100	130 ———
—Tinct. muriate of steel 100	150 * ———

It is necessary in using the measure, that the piston should be kept moistened with a little water: then raise the handle about the eighth of an inch, and dip the syringe into the bottle containing the fluid to be measured; draw up the required portion or rather more, and expel a drop or two until it mark the exact quantity, which may then be transferred to a phial or wine-glass; the tube being held between the thumb and middle finger of the right hand, and the piston pressed down by the fore-finger. After a little practice this will be done, in less time than would be occupied by dropping.

To cleanse the measure after use, draw up a sufficient quantity of water: apply the finger to the point or opening, press the handle down to the utmost and then raise it again, the finger still closing the orifice. Thus the water will be forced up through the packing of the piston, and descend through it again, so as to wash it perfectly clean.

Convenient and elegant stands for these measures, are provided for shops.

R. A. has also constructed a new description of syringe in glass, for general purposes; which is found highly preferable to those of bone or metal; and is now provided, in neat japanned cases, at a very moderate price.

* These are rather exaggerated proportions
ED.

The new instrument consists of a graduated glass tube with a piston, of which the above is the description.

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ROYAL INSTITUTION—THE APPROACHING COMET.

DR. LARDNER has delivered some interesting lectures on the time at which the approaching comet will be visible in this country, which have given rise to some controversy.

Friday evening, in a lecture at the Royal Institution, on the path of Halley's comet, Dr. Lardner took occasion to contradict a paragraph which has been extensively circulated in the public journals, stating that a letter has been received from Sir John Herschell, announcing that the comet, having altered its course, would not be visible, and to which he scarcely considered it necessary to give a contradiction. He observed, that Sir John Herschell knows nothing more of the causes which would influence its return than any other astronomer, and that the statement attributed to him was pure fiction. The only circumstances which can prevent its making its appearance at the period stated are, that there may be existing beyond the orbit of Herschell some other planet with which it may have come in contact, so as to cause it to alter its direction, or that it may come into juxtaposition with another comet in the realms of space, and that their combined attraction may have caused them mutually to vary their course. Mr. Lubbock has calculated that it will make its appearance on the 31st of October; M. Damoiseau's calculation makes it the 5th of November; and Poncelet the 8th or 14th November. On the 10th of November it will probably be at its nearest distance to the earth, and will then most likely be visible amongst the three last stars of the Great Bear, both after sunset and before sunrise. Whether it will be visible or not will depend upon circumstances of which astronomers can have no knowledge, because they cannot predict the exact position in which it may be. It is now probably about the orbit of Saturn. The only difficulty presented in the calculation arises from our not knowing exactly the mass of the planet Herschell, and in proportion as that is above what is computed, so will there necessarily be an error in the period of computation. The number of comets known within the solar system, is between 500 and 600, whilst of these the paths of 137 have been closely examined and described. Of the above, 30 are known within the orbit of Mercury, although this is probably not one half of what actually exists within that space. Taking the number, however, as 30, and computing the quantity existing in a relative ratio between the estimated differences of a sphere, the diameter of the orbit Mercury, and that of

Herschell, it will give the total number of 3,529,407 within the limits of the solar system, and as the number above assigned within the limits of the orbit of Mercury is probably not half of what circulates there, the total number in the planetary system may possibly be upwards of 7,000,000.

This lecture has led to a correspondence between Dr. Lardner and Mr. Lubbock, in which the former made a most satisfactory defence of statements.

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INTRODUCTION OF VACCINATION INTO THE NAVY.

It is not known, though it ought to be, that Dr. Veitch, of Chelsea, and formerly a medical officer under the renowned Lord St. Vincent, is entitled to the merit of having first introduced the blessings of the great Jennerian discovery into our navy. The following note, for the authenticity of which we can vouch, sets the point at rest. It reflects the greatest honour on the memory of the renowned and gallant associate of Nelson, the Earl St. Vincent, and is eminently entitled to record in the annals of medicine. It has come into our possession by chance, but well deserves to be rendered imperishable.

"Royal George, August 1, 1800.

"SIR—I have received your letter of the 29th ult., requesting permission to inoculate with the vaccine matter several men on board His Majesty's Ship Magnificent, who have not had the small-pox, which suggestion does you much credit, in my opinion; and I have no objection to your inoculating those men as proposed, if it meet with the approbation of Captain Bowater.

"I am, Sir,

"Your most obedient servant,

"(Signed) ST. VINCENT.

"Dr. Veitch,

"Surgeon of the Magnificent."

Dr. Veitch claims, he believes with justice, the merit of having introduced the vaccine inoculation into the navy, under the sanction of Earl St. Vincent, when Commander-in-Chief of the Channel Fleet. The satisfactory promptness with which Earl St. Vincent replied to the representation of Dr. Veitch, reflects the greatest credit on the capacious mind of his lordship.

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ON THE USE OF CASTOR OIL.

To the Editor of the London Medical and Surgical Journal.

SIR—Having been long in the habit of frequently employing castor oil largely and repeatedly in numerous diseases, I have often had an opportunity of observing not only the juvantia of the medicine, but also its lædientia; the latter of which, to those who, like myself, "to other purgatives in

several, and especially in most *puerperal* diseases, are well deserving of notice.

The first injurious effect which shall be here mentioned, as resulting from the free exhibition of castor oil, is an irritability of the mucous membrane of the intestinal canal; an instance of which came before me some time since, in the case of a poor woman who was suffering under intestinal irritation, subsequent to a hard and harrassing parturition. The bowels, previous to the labour, had been much neglected, and the symptoms of intestinal irritation were decided and severe. By my order she took an ounce of castor oil every morning for three successive days, and with the best result—the symptoms of intestinal irritation having by that time entirely vanished. But the oil produced, as I had frequently observed in other cases, an irritability of the intestinal mucous membrane, shewn by the stools becoming watery and losing their fecal appearance, the bowels being instantly disturbed by the taking of warm liquids into the stomach, &c., and especially by the change in the state of the tongue, which put on a dull red and glazed appearance on its base and middle, and a bright red around the tip and edges. A dose or two of the compound ipecacuanha powder removed like a charm this state of things.

Another hurtful consequence of taking castor oil largely is a more or less inflammatory state of the mucous surface of the intestinal canal, the diagnosis of which is so well known to all, that it needs not to be alluded to here, excepting that it may not be improper to mention the striking difference usually to be seen in the appearance of the tongue in this disease, from that of an irritability of the same part. The tongue is in this disease, dry, rough, and covered with a white fur in its base and middle, but around the tip and edges it is thickly spotted with bright red dots.

There is an almost latent chronic gastro-enteritis, which is known to most practitioners on account of its obstinacy of cure, or at least difficulty of removal; and in which it is common for the patient to have almost daily recourse to castor oil for the removal of one of its frequent attendants—constipation. But this practice causes too often the prolongation, or even aggravation of the complaint. A modification of the diete absolue of Broussais, leeching the abdomen if necessary, mild enemata, cold water beverage, &c. are, it is well known, far preferable means of cure in this disease to repeated doses of castor oil.

These remarks on a medicine in general use, may probably afford an inexperienced practitioner a hint not only to watch the course of a disease, but likewise the action of the remedy by which he is endeavouring to remove it. I am, Sir, your obedient Servant.

Gainsborough, May 12, 1835.

ROBERT EMINSON.

CASES OF BLINDNESS CURED BY OPERATION.

[We copy the following interesting cases from Neill's Clinical Report of the Diseases of the Eye, treated in the Liverpool Ophthalmic Infirmary, as redounding to the credit of the operator, and to the state of surgery in Provincial Hospitals.]

ELLEN MUCHIN'S CASE,

The Little Girl who was Born Blind.

THE first case which I shall relate has already attracted considerable notice.

Ellen Muchin, *born* QUITE BLIND, was brought to me in the summer of 1831. Her mother stated that she had previously had many opinions on her daughter's blindness, the chief of which were unfavourable to any operation being performed. Feeling deeply interested in the case, I made a minute examination into the state of my little patient's eyes, and general health. The result of the examination led me immediately to propose an operation for the removal of the cataracts which obstructed vision: it was cheerfully and readily agreed to.

In less than a week, this interesting child, then *eight years old*, who had NEVER seen the "*spangled heavens*," nor known the "*BLESSED LIGHT OF DAY*," was in possession of the most precious sense. Her father and mother, with a professional friend of mine, witnessed the first operation. The child was put under no restraint: she sat with her head resting on my friend's breast, her father sat at one side and held her by the hand, she uttered no exclamation, till the operation, which did not occupy half a minute, was completed, when she said, "Oh, is that all?"

On the 4th of October last, upwards of *three years* after the former period, in the presence of many persons, among others, our *amiable* and *INDEFATIGABLE Vice-President*, the Rev. T. BOLD, I operated on the other eye, in the *Ophthalmic Infirmary*. She made a similar observation as on the former occasion, and remarked that she experienced "hardly any pain." So much then for the "wondrous sensibility of the eye."

After the first operation, Ellen and her parents went to Ireland, where they remained till August, 1834, the date of their return to Liverpool. The family had not been here long (in lodgings), ere Ellen and her mother were seized with cholera, and taken to the Fever Hospital. Within a few hours only after their removal, Ellens's mother was a widow, and Ellen herself fatherless, cholera having destroyed their only support. The workhouse received Ellen's three little sisters, who were without friends or home, and this poor family are now beggars!

It was at this period of her distress that Mrs. M. called upon me; I took Ellen into

the Ophthalmic Infirmary as a temporary home, and that a cure might be completed by operating on the other eye. The issue of the second operation has also been gratifyingly successful, as the following notice of this little girl's case will show; it is extracted from the public journals:—

October, 1834.—“There is at present in the Ophthalmic Infirmary, under Mr. Neill's care, a case of very great interest. The patient is a little girl who was born blind. About three years ago, Mr. Neill operated on the right eye; the operation was successful, and she obtained sight; she was then in her eighth year. On Saturday last, the 4th instant, he operated on the left eye, in the Slater-street Institution, with a similar happy result.

“This little creature, born blind, and for eight years in darkness, is now in full possession of the most precious sense. She can distinguish colours, and the smallest objects.

“The knowledge of distance after the first operation was for a long time imperfect. The first object which was presented to the eye was a halfpenny; for weeks afterwards every circular object, no matter how large, or what colour, was called a halfpenny.

“When blind, her residence was in Dove Court, School Lane. She was then familiar with ‘every nook and cranny’ in the neighbourhood. When she obtained sight, she often used to lose her way, sometimes even close to her own door. The instant this would occur, she would shut her eyes, and feel round until some known object was touched, then with her eyes closed she would hurry home, guided by her accustomed sense of touch. She is a pretty, intelligent girl, and is a pattern of neatness.”

Cheselden's case, the memoir of which is detailed in the thirty-fifth volume of the *Philosophical Transactions*, and Ware's case, as detailed in the second volume of his work on the Eye, both materially differ from mine.

Cheselden mentions that his patient, “upon obtaining sight, was so far from making any judgment of distance, that he thought all objects touched his eyes as what he felt did the skin. ‘He saw all objects in proximity to the eye.

Mr. Ware is satisfied that “children from whom cataracts had been extracted, had a notion of distance the first moment they were enabled to see.”

Cheselden's patient and Ware's patient could also distinguish colours previous to the operation. Now my little patient could only tell the sunshine from night, or a flame from darkness. When she obtained sight, it will be seen how very imperfect was her judgment of size or distance: all objects appeared smaller and farther off than their form or position really were. This, however, was what we might naturally expect; for the want of a refracting body, such as the lens, would at once point out this imperfection in vision.

Mr. Ware “was astonished by the facility with which, on the first experiment, he (his patient) took hold of my (Mr. Ware's) hand at different distances; mentioning whether it was brought nearer to, or carried further from him, and conveying his hand to mine in a circular direction, that we might be better satisfied of the accuracy with which he did it.”

Mr. Ware also says, “In this case, however, and in others of a like nature, although the patients had certainly been blind from infancy, I could not satisfy myself that they had not before this period enjoyed a sufficient degree of sight to impress the image of visible objects on the mind, and to give them ideas which could not afterwards be obliterated.” In Mr. Ware's case this may have happened, but in the case of *the child*, which I am now relating, it had not taken place. She never saw; and her after sight proved that an early knowledge of the use of the organ had never been gained.

How is it that all my patients, who after cataract operation recover sight, see imperfectly? and that the imperfection chiefly consists in short sight, *the near object appearing to be small, and far removed*? It is because the lens is wanting, and when a false lens is supplied, the *far object approaches*, and the *near object is increased in volume*.

Ellen's surprise was most ludicrous when she first placed her spectacles on her nose. She had already acquired a three years' knowledge of the surrounding objects, and from experience had gained an intimacy with them; when she saw through her spectacles, her mind had flown to “*Brobdignag*.” “Oh,” said she, “your head touches the ceiling.” Her knowledge of distance was again lost, and nearness was the fault, but *habit* will soon accustom her to the use of her spectacles.

A week after the second operation I bound up the right eye, *the one first operated on*, and desired her to use the other; with it (the new eye) she could tell every object with as much accuracy as with the other eye, and she could also distinguish colours. In fact, she said she could see with equal power with either*.

Mrs. Savage's Case.—The case of Mrs. Savage, No. 2, Crown-street, two doors from Pembroke-place, is interesting, inasmuch as the age of the patient might have been considered a drawback to the success of the operation.

Mrs. Savage applied to me in May last; she was in her 68th year, and quite blind, having cataract in both eyes.

I extract the following note of the operation

* I have this day, Dec. 30th, received a patient having *Congenital Cataract* in both eyes; he is a fine boy, 10 years of age; and I intend to operate upon him in about a week or ten days.

from the *Liverpool Medical Journal*, in which it was reported.

"May 14th. Mr. Neill operated to day on the left eye. The straight flat needle was introduced into the posterior chamber, the capsule of the lens ruptured, the lens made to roll, so as to effect its disengagement, the flat side of the needle placed upon its upper edge, and by a gentle pressure downwards and backwards the lens were made to glide into the body of the vitreous humour.

"27th. Operation on the right eye. The belladonna having been previously applied, Mr. Neill passed the needle, as related above, in the operation on the left eye, and the lens was made to glide, as in the former instance, into the body of the vitreous humour. The patient expressed great astonishment at the freedom from pain during the operation, which did not occupy more than the fourth of a minute."

She can now (with the assistance of spectacles) read her bible.

Ann Rudd, aged 64, quite blind, was received into the Ophthalmic Infirmary on the 19th of July last.

Her residence is No. 7, Crosshall-street.

"The right eye had been affected with inflammation many years since. There is cataract, with adhesion of the iris to the capsule of the lens. The iris is immoveable.

"In the left eye there is hard lenticular cataract, and the iris lively. On Saturday, the 26th of July, I reclined the cataract of the left eye, in the usual manner, the patient expressing astonishment at the freedom from pain. She was discharged cured on the 8th of August, and with spectacles is able to read very small print."

Mary Morris, aged 67. Residence No. 2, Orford-street, Salthouse Dock, was blind in both eyes from cataracts. I operated on both eyes on the 18th of October last, and made her an out-patient on the 24th of the same month, six days after the operation. She is cured, and with spectacles is able to read the smallest print.

Ellen Murray, aged 21, had cataract in the left eye, the result of injury sustained by blow about twelve months since. As there were threatenings of amaurosis in the right eye, I considered it advisable to break up the soft cataract in the left eye, which I did on the 23d of August last. When the patient left the hospital her sight was very good. I have not seen her, however, for four months.

William Ablett, aged 9 years, at play, ran a fork through the cornea of the right eye, and punctured the lens. Cataract formed, and blindness ensued. I performed the operation on the 4th of October last. The boy has now excellent vision.

None of my patients complain of disturbed vision after the operation upon one eye. In fact, I conceive that this opinion, which has been occasionally advanced as a reason for declining the operation when one eye alone is

affected, is erroneous. There are very few persons indeed who, in health, see with equal power in both eyes; and yet we never hear of disturbed vision from this cause.

John Hughes, aged 26, in the employ of Messrs. Lutwyche and Co., No. 19, Carruther-street, was blind of the left eye, from hard lenticular cataract. I operated upon this patient on the 18th November. His sight is restored.

Mary Austin, aged 54, blind for three years from cataract in both eyes, and so very deaf that she can scarcely hear the loudest sound of the voice. I operated on both eyes on the 18th November.

She is restored to sight.

Mrs. Austin's residence is No. 38, Warren-street.

William Griffiths, aged 66, from near Dolgelly, in Wales, was placed under my care a few weeks ago by Sir Robert Vaughan, Bart., M.P. for Merionethshire, who has taken much interest in his case.

I operated on the right eye on Saturday, the 13th of December last; but I am not very sanguine as to the result. I fear that disease of the retina has co-existed with the cataract.

Joseph Joynson, the son of Arthur Joynson, groom at the Star and Garter Hotel in this town, a few days after birth, was seized with purulent ophthalmia; the extent of the disease was not discovered until too late, and blindness in both eyes was the result of this destructive complaint.

He was brought to me in October last, and was then in his sixth year. One eye was quite destroyed, the other retained its form, but the pupil of the eye was blocked up by the opaque lens, which had fallen forward, and become united with the iris.

By the formation of an artificial pupil, I have given this child sight, which, although it can never be what a medical man would call "useful vision," will enable him to see his way, and distinguish larger objects.

Of the many cases which have been under my care during the past year, only one case of cataract terminated unfavourably, and that unfavourable termination was the result of the stubbornness of the patient, who left the hospital too soon, and afterwards suffered most severely from rheumatic inflammation of the eye for many months.

In the month of October last, I operated upon eight different patients for cataract, from the age of 5 years up to 73; and every one terminated in complete restoration to sight! This, then, is my apology, for so strenuously advocating the needleoperation.

*Cures of different species of Mental
Alienation.*

During eight years, practice in the Charenton Lunatic Asylum, 1557 patients have been admitted. The proportion of cures to the admissions is as 1 to 3. If we withdraw from the number of those admitted, the cases of palsy (274 in number), epilepsy 62, and idiotcy 15—all cases allowed by practitioners to be incurable—the number treated will be reduced to 1205 individuals. And as the cures amounted to 516, the proportion will then be 1 to 2.33. Of these cures there were of monomaniacs, 23 men and 128 women—total 151; of maniacs, 160 men and 103 women—total 263; of demented, 1 man and 3 women.

Since the year 1811 the theatrical representations formerly so much had recourse to in the treatment of insanity, have been forbidden; M. Esquirol found that they did more harm than good. He even found music, though more harmless, only of transitory benefit in those instances where its effect was favourable at all.

During the prevalence of epidemic cholera in Paris, three insane persons entered the asylum, who dated their insanity from attacks of cholera, fear having probably produced its worst effects.

Extirpation of the Parotid.

M. Roux has lately performed this difficult and hazardous operation with complete success. The whole of the gland was cut out. He had previously placed a reserve ligature round the carotid, which was not however required. Palsy of the face existed previous to, and, of course, after the operation.

North London Hospital.

We are extremely happy to observe that the funds of the North London Hospital have been considerably augmented by a subscription entered into at the Thatched House Tavern. Lord Brougham in the chair. The subscription amounted to £1,250, including £834 collected through the exertions of Mr. Lionel Goldsmid.

Physician to the Westminster Hospital.

Dr. Burne has been elected physician to the Westminster Hospital.

Physician to the Bethlem Hospital.

Dr. Morrison has been elected, after a sharp contest, physician to the Bethlem Hospital. Few of the other candidates possess so much experience in the treatment of the insane. The Bishop of London was one of his chief supporters.

LITERARY NOTICES.

In the Press.

A Clinical Account of Fever, Gout, Rheumatism, Cholera, &c., and various Diseases of the Chest. By Dr. Aldis, Cantab., Member of the Royal College of Physicians, London.

A New Practical Formulary of Hospitals; or, a Collection of Formulæ of the Civil and Military Hospitals of France, Germany, Italy, Great Britain and Ireland, &c. By M. Edwards, M.D., and P. Vavasseur, M.D. Translated and Augmented by M. Ryan, M.D.

TO CORRESPONDENTS.

Crito.—The Rhabarbarians cannot save themselves—their love of science is shewn too late.

An Enemy to Empiricism.—The medical reform will protect the educated portion of the profession, though, we fear while our nobles foster quackery, it will continue.

A Student at the London University, A. C., I. K., and others.—The indisposition of Dr. Thomson has caused an interruption in the publication of his lectures, but we hope the speedy recovery of the learned Professor will enable us to resume them.

Dr. Fletcher's Lectures.—We daily expect a continuation of this elaborate Course.

Professor Burnett's Lectures.—In reply to several Correspondents, we beg to state that we are not able to continue the Lectures delivered by Professor Burnett at the Chelsea Garden, in consequence of the delicate health of that gentleman, which renders him inadequate, at present, to attempt the labour of correcting our reports.

Mr. A. Booth.—We request an interview.

Philo-Celsus, Democritus, and Celsus.—We shall be obliged by the communications.

Mr. Dewhurst.—We cannot insert the reply to the *Lancet*.

Ursa Major.—We are not such lunatics as to fill our pages with wild disquisitions on Comets; nor with such vulgar unmeaning trash as Dramatic Sketches—Cranium and Shin-bones. Neither should we introduce the name of a well-known brandy-merchant, Mr. Brett, of Drury-lane, among quacks, because he refused to advertise on our wrapper—nor should we praise Mr. Harrison Curtis' new operation of applying *lapis infernalis* every morning to a cataract, to obviate the usual operation, because he advertises with us and is a subscriber—nor could we laud Baillie's Breakfast Bacon, and somebody's Essence of Ginger, to secure their advertisements.

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VOL. VII.

LECTURES
ON THE
INSTITUTIONS OF MEDICINE,

DELIVERED BY JOHN FLETCHER, M.D., F.R.C.S.E., AT THE ARGYLE SQUARE SCHOOL OF
MEDICINE, EDINBURGH; SESSION 1834-35.

LECTURE XIX.

Evidences of the Seat of Irritability in the Ganglionic System of Nerves—(continued).

EVERY presumptive evidence, then, is in favour of the opinion already advanced, that the apparently simple nervous apparatus of such of the invertebrate animals as have a distinct nervous system at all, is no less compound than that of the vertebrate; and positive evidence to the same effect seems to have been afforded by recent investigators (a), who have found that in some insects, the chain of knots above spoken of as a main part of this apparatus, besides supplying nerves to the parts which minister to the organic functions in the manner of a regular ganglionic system, gives off distinct lateral nerves arising by single roots from the central parts, and distributed principally upon the respiratory organs, as well as others arising each by an anterior and posterior root, and going chiefly to the organs of voluntary motion and sensation, the whole constituting a perfect cerebro-spinal system as found in the highest tribes. The argument therefore of the earlier manifestation, as we ascend in the scale of animals, of the ganglionic than of the cerebro-spinal system of nerves, in favour of regarding the former as the immediate seat of irritability, must not be extended to all the invertebrate tribes, however applicable it may be to those which, without any concentrated and distinct nervous apparatus, still display traces of nervous matter; although it must be confessed that is not easy to say to which department, in the latter case, the isolated nodules in question correspond. The analogy however, so constantly observed in other respects, between the lowest animals and the human embryo in its earliest stages, is certainly favourable, as we shall find from the next paragraph, to the idea that such nodules belong rather to the ganglionic than to the cerebro-spinal system.

VII.—That the development of the ganglionic system of nerves, in the human embryo, precedes that of the cerebro-spinal, and that the first part of it, which becomes obvious is the cardiac ganglion, has been confidently asserted (b): and this circumstance taken in conjunction with the facts, not only that irritation precedes sensation, thought, and voluntary motion, but also that the heart—the *punctum saliens* of Harvey—is the organ of the body which first manifests such irritation, seems to be a strong corroboration of the doctrine which refers irritability to the ganglionic system of nerves, as its primary seat. It is further asserted, not only that the sympathetic nerve is remarkably distinct, and its ganglions perfect and of their usual colour, while the cerebro-spinal system is still very obscure, but also that all these ganglions are relatively larger and more perfect in the foetus than after birth, except the cæliac (c); all which very well corresponds with the hypothesis under consideration, since while the irritability of every organ of the body which ministers to the circulation of the blood, nutrition, secretion, and absorption, is unquestionably more in requisition during fetal than during extra-uterine life, that of those which minister to digestion and generation is as certainly much less so.

VIII.—Again it is abundantly well known how frequently mature human fetusses are

(a) Newport on the Sphinx Ligustri, Primordis, 1813.
Phil. Trans. 1833-34.

(b) Ackerman, De Systematis Nervosi 47 & seq.

(c) Lobstein, De Nerv. Sympath. 1823, p.

born with a defective cerebro-spinal system of nerves, or even altogether without a spinal cord or a brain (*a*); whereas such defects are said seldom or never to occur with respect to the ganglionic system of nerves, sufficiently indicating its paramount importance in maintaining that circle of vital actions which requires only irritability for its exercise. It is true not a few accounts are on record of monsters, born at the full time, without any appearance whatever of a nervous system of any kind; but, if we attend carefully to such accounts, we shall perceive that their authors have been in general employed in looking for a spinal cord and brain, and the larger nerves connected with them, and might easily have overlooked those smaller filaments which belong to the ganglionic system: and this suspicion seems the more probable, when we call to mind how long it was before this system of nerves, even in the most perfect examples of the highest class of animals, was detected, and how recently the presence of nerves in the heart, upon which some of the most conspicuous filaments of this system of nerves are distributed, was resolutely denied. It is not indeed improbable that when the monstrosity is excessive, the unformed mass may have its nervous system, as well as all its other organs, as is the case in quite the lowest tribes of animals, so generally diffused as to be invisible (*b*); but it is stated on good authority, and as the result of numerous and patient inquiries on the subject, that, so long as a human monster does not very considerably depart from the human form, the ganglionic system of nerves is in general, if not always quite perfect (*c*). It is a good illustration also, as well of the independence of this system upon the cerebro-spinal, as of its indispensability—whatever may become of the latter—to the proper vital functions, that in idiots, whose cerebro-spinal system had become diseased and atrophic, the ganglions of the sympathetic nerve have been found in general perfectly healthy (*d*).

IX. It might have been almost inferred, from the contents of the seventh section, that the ganglionic system of nerves would be relatively more developed in the young than in the aged; and it has accordingly been found that this development is, in all animals, generally inversely as the age of the individual in which it is examined (*e*), the ganglions in old age being paler, drier, and more attenuated, and sending out fewer filaments, than at any other period (*f*). It appears also that the ganglionic system of females, bears in general a greater relation to their cerebro-spinal system than that of males. These facts, coupled with the acknowledged greater irritability of children and females, in comparison with their sensibility, their faculty of thinking, and their power of voluntary motion, than of adults and males, are very corroborative of the hypothesis in question. Perhaps, also, it may be added, under this head, that the length of time during which the irritability of each organ survives apparent death, seems to be, *cæteris paribus*, proportioned to the number and size of the ganglionic nerves with which it is supplied; as is well exemplified in the auricles of the heart, as contrasted with the ventricles, and in the right side of the heart, as contrasted with the left (*g*).

X. It is further in favour of the doctrine that the ganglionic system is the immediate seat of irritability that it is similar in structure to the sensiferous; since it renders it probable that the ganglionic nerves, as they certainly do not communicate sensibility, communicate at least that property which is most nearly allied to it. This similarity is observable, first in the manner in which the grey and white matter are intermingled, in the former system, not only in all the proper ganglions, but in all the nerves connected with them, and in the latter in all the ganglions placed in the roots of the several sensiferous nerves; and secondly in the general character of the white matter, so far as it can be ascertained, in both. It has been already noticed, under the head of the nervous tissue in general, that in the ganglionic nervous tissue the grey and white substances are everywhere inextricably interwoven together; whereas, in the cerebro-spinal—including of course the sensiferous department of it—this intermingling is confined to the central parts, so that the nerves consist of white substance alone. In this statement it was of course intended to include the ganglions of the sensiferous system of nerves among the central parts, and, in these, the mutual relations of the grey and white substances are almost entirely the same as in every part of the proper ganglionic system; nor is there any visible difference in the manner in which the nervous cords appear to enter each ganglion of both systems, to be

(*a*) Morgagni, Sandifort, Soemmering, Meckel, Pullin, Pole, Simmons, Cam, Oslander, Béclard, Burrows, Kelch, Lawrence, &c. The most complete treatise on the subject of acephalous monsters is by Tiedemann.

(*b*) Dr. Clarke, Phil. Trans. 1793, &c.

(*c*) Lobstein alone, *De Nerv. Sympath.* 1823, p. 52 & seq. relates no fewer than six remarkable instances, in which the brain and numerous other organs were deficient, but in all which the ganglionic system

was quite entire, and in some even more developed than usual.

(*d*) Dr. Cayre's account of the dissection of nine idiots, *Nouv. Journ. de Med.* t. iv.

(*e*) Weber (*Anat. Comp. Nervi Sympathetici*, 1817).

(*f*) Lucæ (*De Nervis Arterias, Venasque Comitantibus*, 1786), Lobstein (*De Nerv. Sympath.*, 1823, p. 55).

(*g*) Scarpa, Walter, H. Cloquet, &c.

subdivided within its substance into more minute filaments, and to be re-united as they prepare to emerge from the opposite surface, although if we are to regard the ganglions—not only the insensible, as already stated, but also the sensiferous, as will be stated in future—as independent sources of nervous influence, it would be more correct to represent all the nerves connected with them as proceeding from them, and to speak of such nerves as beginning each by minute roots from the central parts of the organ, and proceeding thence in opposite directions. However this may be, the relative distribution of the grey and white substances is, in both sets of ganglions, the same (a); and when it is remembered that the structure, not only of the grey matter, but, in these two systems of nerves, of the white matter also, unlike what it is in the respiratory and motiferous systems, is plexiform and soft, the general structural similarity of the proper ganglionic and sensiferous systems of nerves will be sufficiently apparent, and it will not seem unfair to infer that, as the respiratory and motiferous systems of nerves, the structure of which is similar, are the vehicles of different kinds of stimuli, so the ganglionic and sensiferous, which are equally similar in structure, are the seats of different kinds of susceptibilities.

XI.—It has been already stated that certain agents, such as narcotic substances, which when applied to the central parts of the sensiferous system of nerves, diminish or altogether destroy sensibility, when applied to all appearance directly to parts possessed of irritability, have similar effects with regard to this faculty; and as this is a fair *general* argument that it is not immediately on these parts, but intermediately through some department

(a) The internal structure of the ganglions, insensible and sensiferous, has been investigated principally by Meckel, sen., Haase, Scarpa, Monro, Bichât. Wutzer, and Lobstein, the four first of whom, as already observed, regard the former as merely appendages to the cerebro-spinal system, and the three last as independent organs; and the general result of their inquiries appears to be that there is little or no perceptible difference in structure between the two. The investigations of Meckel (*Mem de Berlin*, 1745), were confined almost to the sphenopalatine ganglion; but those of Haase (*De Gangl. Nerv.* 1772), were more extensive. By means of maceration and boiling he found that, in the centre of the ganglions in general, the minute white filaments, of which chiefly they consisted, were apparently teased out into a kind of net-work, but that, towards the surface, more or fewer of them were united together at acute angles, and thus constituted the nerves supposed either to terminate in or to arise from the ganglions. These observations were confirmed by Scarpa (*De Nerv. Gangl.* 1779), and Monro (*On the Struct. and Funct. of the Nerv. Syst.* 1783), who further thought that they observed that the filaments of all the nerves supposed to enter a ganglion, after having been unravelled within its substance, were so distributed, on preparing again to emerge from it, that every nerve proceeding from a ganglion received at least one filament from every nerve which had apparently entered it; and it was in this observation that the celebrated hypothesis of these authors, which has been already alluded to, respecting the use of the insensible ganglions, originated. But it was not merely of these subdivided and re-united cords, as in a mere plexus, that the ganglions, whether insensible or sensiferous, were found to consist, since in the interstices of these, a soft semi-liquid substance, of a colour between yellow and grey, and which

by Winslow, Johnstone, and others, had been previously presumed to be analagous to the cortical point of the brain, was uniformly met with; and although, according to Bichât (*Anat. Gén.*, 1801), supported by Wutzer (*De Corp. Hum. Gangl.* 1817), the former substance differs in several essential particulars from the latter, in as far as its merely physical and chemical properties are concerned, yet it may still bear the same physiological relations to the nervous filaments of the ganglions, whether insensible or sensiferous, as the grey substance of the brain bears to the white substance of that organ. Wutzer, moreover, amply confirmed the observations of Scarpa and Monro respecting the manner in which the nervous cords appear to be unravelled, and their filaments again collected, in the ganglions of both systems; and has given plates of the internal structure of some of the chief ganglions of each, the appearance of which is almost precisely the same: it is unnecessary to repeat, however, that a very different view may be taken of the nature of these ramifications. By Lobstein, lastly, (*De Nerv. Sympath.*, 1823), the presence of the soft, greyish substance equally in the insensible and sensiferous ganglions was further established, with the additional observation that, the smaller the ganglion, in general the greater was the relative quantity of this substance which it contained; and he confirmed also the remarks of preceding authors respecting the intermingling of the nervous filaments in the substance of the ganglions of both sorts. The fact, therefore, of the similarity in structure of the two appears to have been abundantly made out by the concurrent testimony, as well of the opponents, as of the advocates of the doctrine, which ascribes to the ganglionic system of nerves a property analogous to that which the sensiferous system is universally acknowledged to impart.

or other of the nervous system, that they operate so, taken in conjunction, not only with the direct analogy of sensibility and irritability, but also with the striking similarity in structure of the sensiferous and ganglionic systems, it is a fair *special* argument that it is through the latter system that they take effect, and consequently that this system is the immediate seat of irritability.

The remarkable circumstance, also, that the stimulus of galvanism is not well conducted by either the sensiferous or ganglionic system of nerves, while by the respiratory and motiferous its conveyance is instantaneous, is a further proof of the functional analogy, as well between the two former as between the two latter, and has therefore an obviously favourable bearing on the hypothesis in question.

XII.—The last circumstance to be mentioned, as tending to the conclusion that the ganglionic system of nerves is the immediate seat of irritability, is that of the nerves of this system, while they are of a similar form, colour, and consistence, when distributed on parts the irritability of which is of the same character—that is to say which are liable to be excited in the same manner by the same stimuli—being quite dissimilar in all these respects, when they supply parts the irritability of which is different. Thus, while the filaments going from the ganglions to the several voluntary muscles, all which have one general character of irritability, are said all to display the same general aspect and physical properties, those which proceed from the cæliac ganglion, for example, respectively to the stomach, liver, and other organs, each of which has a character peculiar to itself, have these properties very distinct; those sent to the stomach being conical, white, and firm, those to the liver cylindrical, red, and soft, and similar differences manifesting themselves between the filaments respectively of the splenic, mesenteric, hypogastric, and other plexuses (a). This remarkable coincidence then, if generally admitted, of certain modifications of a common faculty, as displayed by different organs and corresponding modifications of a common system of nerves, as distributed to these different organs, seems to be a strong testimony in favour of the doctrine, that this general system of nerves ministers directly to the general faculty in question.

Such, then, are some of the principal evidences brought forward in support of the hypothesis which places irritability on the ganglionic system of nerves as its immediate seat: the principal objections, on the other hand, to this hypothesis, in addition to the supposed circumscribed distribution of this system of nerves, and some others which have been already incidentally answered, are the alleged facts—at first sight conclusive against it—first, that the application of stimuli to a ganglion has little or no effect in producing any display of irritation, either in the ganglion itself, or in the organs which it supplies with nerves; and, secondly, that the destruction or removal of a ganglion has little or no immediate effect in diminishing the irritability of those organs, the nerves of which are derived from it.

It has been confidently asserted by many experimenters (b), that the ganglions of the sympathetic system in general may be acted on either mechanically, galvanically, or, as they suppose, chemically, without either betraying themselves any irritation, or giving rise to any irritation in the contiguous parts; and although some have asserted that stimuli applied to the cardiac ganglion, for example, do excite the motions of the heart, as much as when applied directly to the heart itself (c), while others, again, have represented such stimuli applied to the cæliac ganglion (d) or hepatic plexus (e), as competent to excite, not only irritation, but also sensation, in the parts to which their nerves extend, perhaps it may be safely conceded that no manifestation anywhere of even irritation follows the application of stimuli to a ganglion, without any compromise of the doctrine that it is in the ganglionic system that irritability is primarily seated. It is true, when the central parts of the sensiferous system of nerves—between which and the ganglionic system there is so close an analogy—are so acted on, the result is sensation, acute in proportion to the intensity of the stimulus applied; and it is highly probable, that when such stimuli as those just alluded to are applied to a ganglion, the result is irritation in the part immediately acted on, but such irritation may exist without any *manifestation* of it. It cannot be evinced by any expression of pain on the part of the animal on which the experiment is performed, for irritation is without consciousness—it is “*perceptio*,” but not “*perceptio perceptionis*,” nor can it be evinced by any perceptible motions on the part irritated, for a ganglion is without muscular fibres, and has not therefore the physical structure requisite to such motions. Nay, it is by no means certain, as already stated, that irritation may not exist without even imperceptible motion, although in as far as it does so, it cannot be regarded as quite synonymous with life—but whether or not any insensible motion takes place when a stimulus is applied to a ganglion, it is obvious that we cannot recognise irritation by this means. Whatever irritation may exist, therefore, it is impossible that there can be any manifestation of it in the ganglion itself, and it is highly improbable that any

(a) Lobstein, De Nerv. Sympath., 1823, p. 45.

(b) Soemmering, Behrends, Bichât, Wutzer, Bell, Lobstein, &c.

(c) Whytt, Fowler, Humboldt, W. Philip, &c.

(d) Flourens.

(e) Haller.

such irritation will be extended elsewhere. The nerves supplied by the ganglions to the contiguous organs, if they communicate any thing at all to them, as acted upon through the ganglions, which is very doubtful, can be conceived, in conformity with the doctrine now under consideration, to communicate only an increased susceptibility of action on the application to the organs themselves of the requisite stimulus, not a stimulus capable of exciting the susceptibility already resident in them; and without this stimulus no irritation can, in any instance, take place. It is a very different thing when any extraordinary stimulus is applied to the root of a respiratory or motiferous nerve, the office of which is to convey stimuli in general to the organs in which they are distributed, and which, furnished as they are already from another source with the second necessary condition of action, namely, irritability, immediately obey such stimuli and manifest irritation. But doubling or trebling the latter condition of action, if it were possible to do so, by stimulating the ganglions, would not supersede the necessity of the former, which, in this case, must be wanting; so that whatever irritation were thus excited, it might *à priori* have been conceived likely to begin and end in a part in which any display of it was impossible. It is hence probable, that when the heart has appeared to be called into action by a stimulus applied to the cardiac ganglion, it was by means of some filaments of the pneumogastric nerve, with which the proper ganglionic nerves were associated, that the stimulus was conveyed in the same manner as when pain has appeared to be excited by such stimuli applied to ganglions, it was by means of some sensiferous filaments, with which the proper ganglionic nerves had become amalgamated, that the sensation was effected.

Nor is the fact, that the destruction or removal of a ganglion does not immediately entail any diminution of irritability on the organs to which the nerves from this ganglion extend, at all militate against the doctrine that it is in the ganglionic system that this faculty is primarily seated. It is unquestionable, that the destruction or removal of any portion of the central parts of the sensiferous system of nerves—so analogous to the ganglionic—entails a corresponding failure of sensibility on the organs which are supplied with nerves from this portion; but if a similar effect be anticipated with respect to the irritability of the heart, for example, from the demolition or abstraction of the cervical ganglions (*a*), or even of the cardiac ganglion (*b*), it must be by one unacquainted with the facts already insisted on, first, when speaking of the non-interruption of the irritability of a muscle by the division of the principal nervous trunks with which it is supplied, by the removal of the brain, or even, for some time, by the total separation of such muscle from the rest of the body, and again, when speaking of the fatal effects of withdrawing the central parts of the nervous apparatus of the invertebrate animals, as a proof of their corresponding rather to the cerebro-spinal, than to the ganglionic system of the invertebrate—that, from the intimate interweaving together, in every point of every ganglionic nerve, of grey and white matter, every such point is a focus of nervous influence to itself, and quite independent, therefore, at least for a time, on any common centre, for the continued display of the peculiar faculty to which it ministers. On the other hand, the sensiferous nerves, consisting as they do of white matter alone, must be regarded, not as sources of the characteristic faculty to which they are subservient, but merely as chains of communication between the organs on which they are distributed, and the sensorium; so that instantly, upon the latter being injured or withdrawn, the former are paralyzed throughout their whole extent. We may liken, if we please, the individual ganglionic nerves to wires composed of zinc and silver, and the ganglions connected with them to a voltaic pile: the former, perhaps, under ordinary circumstances, act principally as conductors of a power generated in the latter; but, upon being separated from it, are still competent to afford a certain quantity of the same power generated in themselves (*c*). Hence the division of the large vessels going to a limb, with which principally perhaps its ganglionic nerves reach it, has no immediate effect in impairing its irritability; and what effect it has, after a time, in this way, is pretty certainly to be ascribed, as already remarked, rather to the defective supply of blood to the parenchyma of the limb, by which the ganglionic nervous matter therein contained should have been renewed in proportion to its exhaustion, than to any obstruction of the ganglionic nerves in their course. A knowledge of these facts might have led us to expect an almost entirely negative result from the experiments just alluded to; and we cannot therefore, from such a result, infer anything prejudicial to the hypothesis now under consideration.

Upon the whole, the doctrine which regards irritability, not as inherent in all or any of the organized tissues of animals, independently of the nervous, but as immediately seated in the latter, and that, not in all its departments, but in the ganglionic department alone, seems to be as well entitled to credit as any doctrine, resting upon presumptive evidences alone, can be. The fact is not indeed demonstrated, nor is it perhaps susceptible of de-

(*a*) Bràchet, Sur les Fonctions du Syst. chet, &c.
Nerv. Gangl., 1823.

(*b*) Magendie, Dupuy, Dupuytren, Bres- tion, 1833.

(*c*) Dr. Lovell Phillips, On Inflammation, 1833.

monstration; but he who determines to wait for demonstrative evidence on all, or almost any point of physiology, must make up his mind to halt on the threshold perplexed, and stationary in this perplexity. Upon every subject of physiology, and in every stage of our progress in the science, one opinion must be better supported than another, and any opinion founded on the best information which the present state of knowledge affords, and taken up, not more as a resting-place for the present, than as a stepping-stone to the future, must at least be better than no opinion at all, since it rather invites than opposes itself to further investigation, and while it spares us much heart-sickening and hopeless confusion at first, often enables us, by working with our previous conclusions in future speculations, to arrive rapidly at truths for which we might otherwise have waited in vain for ever. Let us not mistake, as is too often done, the vacillation of the timid, the indolent, or the incompetent for the caution of the philosopher, nor the decision of those who have boldness, industry, and talent enough to come to the legitimate decision for the rashness of the visionary. It has been admirably remarked, that he who dares not form an opinion must be a coward—he who will not must be an idler—he who cannot, must be a fool. Let us have an opinion upon every thing; but let us take up such opinion only after mature and dispassionate consideration of all the established facts which bear upon the subject, and be ready at once to qualify or to resign it, should any new facts occur to stagger or to overthrow us. It is no reproach to any one to be wiser to-day than he was yesterday; but it is a severe reproach to be from first to last an irresolute waverer, from a silly affectation of seeking for positive evidence in a science where such evidence is often unattainable, and a captious and fidgetty habit of starting difficulties, which a more powerful mind would either have disregarded as frivolous, or at once have dismissed as imaginary.

With respect to the manner in which irritability or vitality, presuming that its immediate seat is, at least in all the higher tribes of organized beings, the ganglionic nervous tissue, may be presumed to be extended to the other organized tissues, so that each appears to be *per se* possessed of it, very little needs be said. In the case of sensibility; the immediate seat of which is the sensiferous nervous tissue, there is no difficulty in at once admitting that this is the exclusive seat of the property in question, and that the comparatively few other tissues which appear to be *per se* possessed of it are, except in as far as they contain this, entirely insensible. But, with respect to irritability, we have more hesitation in confining this to the ganglionic nervous tissue, since irritability is, unlike sensibility, not merely an adventitious, but an essential property of organized beings, and seems therefore to be necessary, not only to every organ and every organized tissue, but also to every point of such tissue, in order to effect its molecular actions. But we must remember that there is no point of any organized tissue which does not contain ganglionic nervous matter, such matter being essential to its organism; and, consequently, there is no point which is not possessed of the property in question, which is accordingly—as has been from the first insisted on—the result of such organism. It is true, unless every organized tissue be one uniform mass of ganglionic nervous matter, there must be interstices of some other matter.

Thus there must be spaces in the ganglionic nervous matter occasioned by one or other of those peculiar aggregations of matter which go to form respectively the cellular, dermoid, mucous, serous, fibrous, vascular, osseous, cartilaginous, or muscular tissues, wherever an organized tissue presents itself; but the spaces thus occupied are so infinitely minute as to be perceived only by the mind's eye; and we may, therefore, without doing much violence to preconceived opinions, deny that they have direct participation in irritability or vitality. As merely a property, it can never be directly transferred; and if it be immediately, it must be exclusively that of the ganglionic nervous system (a). But such in-

(a) It was the opinion of Galen, although he knew nothing about irritability, that the nerves, as the immediate receptacles of his Πνεύματα, vivified, as it were, all the parts in their vicinity, καθάπερ ὅταν ἐπιτῶν περιέχοντος αἴρος ἐκ τῆς ἡλιακῆς αὐγῆς ὁρμηθῆῖσα τις ποιότης; (De Placitis Hipp. et Plat.); and a somewhat similar notion has been propagated in recent times by Reil, Humboldt, Aldini, Heineker, Lobstein, and others, who speak of a nervous halitus, gas, or atmosphere, an organic ether, &c., as the immediate source of the vitality of all the tissues of the body. "Statuo," says Lobstein, "materiem subtilem, imponderabilem, incoercendam, magnetico, vel electrico-galvanico fluido analogam, a pulpa nerva se-

cretam, evolutam atque transmissam, solam actuosum, quod nervis inest, principium constituentem. Admitto istam materiem mobilissimam, et summam nobilitatis gradum assecutam, circa nervorum funiculos atque ramos, tum et circa carnem muscularem, efformare atmosphæram—eam sensibilitate esse præditam, id est facultatem habere stimulum percipiendi, atque, ope organorum e quibus emanat, contra eum reagendi." (De Nerv. Sympath. 1823, p. 123). Dr. Lovell Phillips has lately endeavoured to illustrate the subject by comparing the changes effected by the property derived from the nerves in the organized tissues in general, to which this property gives, as it were, a new mode of being, to

ferred foreign substances, thus destitute *per se* of irritability or vitality, are not, nevertheless, in the condition of merely inorganic matter—of a mere “solidum mortuum,” with respect to either their structure, their composition, or their actions. It is never otherwise than as combined into a whole with ganglionic nervous matter, that they actually exist; and although the former alone perhaps has a structure and composition which can be strictly called vital, and is susceptible of strictly vital changes, still the latter are not less *sui generis* in these respects possessing, as they must do, such physical and chemical characters as qualify them to co-operate in these changes, and thus to temper and modify, in every part, the resulting phenomena. It is easy to conceive that, if a flame be applied to a mixture of combustible and incombustible matters, the former alone will burn, but the latter may still be competent to undergo, each according to its peculiar character, such modifications of expansion, liquefaction, vaporization, incandescence, and so forth, as will materially qualify the nature of the combustion, and may even be essential to it. It is in a similar relation that the substances occupying the interstices of the ganglionic nervous matter, in the several organized tissues, appear to stand to the nervous matter itself—they have *per se* no irritability or vitality, nor are the phenomena which they display strictly vital; but they are nevertheless such as no merely inorganic matters could have presented, and such as not only temper and modify vital action, but are perhaps necessary to render such action available.

those effected by the matter of heat in water, which is thus converted into vapour, and distinguished afterwards by characters quite distinct from any which it previously possessed. (On Inflammation, 1833). All these attempted explanations, however, seem to

proceed upon the presumption that irritability is a substance, and as such actually communicated by the nerves to the tissues with which they are associated, instead of merely a property, and therefore quite incapable of being so transferred.

SELECT LECTURES,

FROM

M. BROUSSAIS'

Course of General Pathology and Therapeutics,
translated and revised

By JAMES MANBY GULLY, M.D.

LECTURE II.

The Fluids in Disease--Debilities--Inflammation.

THE fluids may be variously modified: they may be retained in the vessels and give rise to congestions. Obstacles may present themselves to the course of the blood, and these constitute a considerable class of important diseases, which I believe I was the first to mention as distinct from others, and which I was formerly in the habit of describing in the first place, though the clearness and precision I would desire to establish oblige me to leave for after consideration. These diseases in fact may disappear, and I by no means intend to say, that all the alterations on which they depend are incurable; nature is not without the power of relieving them.

The fluids then may be retained by the different affections denominated inflammations, neuroses, sub-inflammations, and organic alterations. They may be eliminated from the vessels constituting hemorrhages and fluxes; they may be depraved in their composition, and this is most frequently the case. In the next place, the fluids being retained, decomposed, and altered in the diseased parts, those of the remainder of the system may also become altered and decomposed: hence drop-

sies, œdema, the effusions consequent on and caused by inflammation.

Debilities.—Next to the alteration of the fluids come the debilities; these are sub-excitations, which have as certain an existence as super-excitations. But neither of these have any thing to do with those of Brown; for I point out to you many intermediate stages between the first and last degrees of inflammation, whereas Brown divided diseases into two series, one with augmentation, and the other with diminution of the vital power abstractedly considered, and not in relation with the organs. This power he regarded as an entity which at one time increased, and at another curtailed the energy of the whole body in an extraordinary manner. In fact, Brown's was a system of ontology.

I shall proceed to give you an idea of the nature of these sub-excitations, in order that you may understand the terms of which I make use, and that you may form a precise notion of all that will pass before us, not in an abstract manner, but in their immediate application to the living matter. When I began to teach the doctrines that I profess, I was in the habit of first laying down the general principles: I subsequently tried the method which takes its start from particular facts. Having consulted, on the choice between these methods, those of my hearers who appeared to be gifted with a discriminating spirit, and having myself revolved the point, I came to the conclusion that the latter, although analytical, was not equal to the former. Indeed, particular facts are so numerous, the details so multiplied, that it be-

comes an immense and even endless task to insist upon a knowledge of them all on the onset. It is better to commence with their common points of resemblance, taking the chance of not being perfectly understood. After a few lectures we are much more likely to be understood than if we had commenced with the details of isolated facts, while the latter are readily applied to the general or common notions, as soon as the lecturer develops them—in other words they are often recognised beforehand.

Sub-excitation or vital action in a degree beneath the normal state is, in the first place, exhibited after irritations: this is the most ordinary event. Every part that has suffered from inflammation, and when the latter has recovered is weaker than it previously was: the body exhausted by an effort, by a fever, remains debilitated, even though no blood shall have been drawn, and no abstinence observed. All convalescence is accompanied by weakness, which is an actual pathological state, worthy to be particularly attended to, and which has been truly denominated a secondary disease. In fact there is a debility to be managed, and it is of no small consequence to avoid changing it too rapidly into the contrary excess of strength. In the next place, whenever an excess of action occurs in any part of the nervous system, all the organs dependant on it are in a state of debility. If this increase of action has taken place in the brain, the functions of the muscles under its influence are weakened, as are also the sensitive and intellectual functions: this is the case either when there is inflammation, or when a sanguineous effusion in the brain matter has occurred, or a foreign body exists in it, or when there is serous effusion on it: in all these instances you behold debility follow super-excitation: you also behold it after any irritation that has existed in the medulla oblongata, in the spinal cord and in the nerves. It is of greater or smaller extent, according to the number of functions that the nervous apparatus affected has under its influence.

Thus it will be found that debility is equally important with irritation: but it should only be treated of after that condition; and you may find the reason for this in the fact that the majority of debilities are caused by super-excitations. After inflammation you have debility; after neurosis, debility; after hemorrhages, debility, and so on. It is connected, as a consequence, with all irritations, and is the common termination of them. You will ask me wherefore I speak of it in particular now, when it is my intention to mention it under each of the irritations? Because when I come to speak of inflammation, or neurosis, 'sub-inflammation, and organic alterations, your attention will be so rivetted on each of these phenomena, that you will have no thought of the consecutive states. and debility is so important that it will be necessary to return to and consider it atten-

tively. Meantime, care must be had to distinguish consecutive from primary debility, of which I shall also take occasion to speak.

Inflammation.—Inflammation is the principal phenomenon of pathology. Enter into any part of any hospital, and you find it at every step you take. You rarely meet with asphyxia, syncope or other similar affections purely asthenic and ab-irritative, but almost always with inflammation or its consequences, sub-inflammations, organic alterations, decompositions of the fluids, extravasations, &c. Go to the origin of all these affections, and you will almost invariably trace it in inflammation. Strictly speaking, therefore, this is the most important phenomenon of pathology, and that with which we ought to commence.

I will not undertake to give you a definition of inflammation, inasmuch as definitions for the most part only imperfectly represent the things they are intended to give an idea of. I prefer to offer you a summary idea of the state in question, and then proceed to its history, doing this however sufficiently in detail, that you should not be confined to purely theoretical data nor a limited review of particular facts.

Inflammation of the exterior surface of the body is recognised by four phenomena—pain, tumefaction of the affected part, increase of heat perceptible to the person suffering from it, and even to the observer, in comparison with the surrounding parts, and by redness beyond the natural degree. But we must not be confined to these four phenomena: we should also take advantage of the light thrown upon the subject by anatomy, and proceed further with our investigations. If we incise this inflamed point, we behold a sanguineous congestion of the vessels, which are now numerous and more filled with blood than in the normal condition. If we endeavour to ascertain how the circulation in it is going on, we find the following appearances: there is in the first instance augmented activity of the circulation of the injected vessels: subsequently a stagnation of the blood takes place in the centre of the tumour, and if an attempt is made to throw an injection into it, an obstacle will be found to it. An extravasation of blood into the areolar tissues of the part, if there are any—and there almost always is—is effected, the blood being not only extravasated, but mixing with the lymphatic (partly albuminous and partly fibrinous), the serous and the mucous matters. The activity of the circulation in the immediate neighbourhood of the inflamed point meantime continues: the surrounding cells also fill, the central ones with pure blood, the others with sanguinolent exudation. As the distance from the centre of inflammation increases, the infiltration is less bloody, and finally is altogether lymphatic and serous. In analysing the different parts of the tumour, it will be found that the central extravasations or exudations, contain more fibrin and albumen

than those of the circumference, in which gelatine and serosity predominate.

But how does all this terminate? If the inflammation be not excessive, and its cause ceases to operate, the fluids no longer go on accumulating around the inflammatory nucleus; the absorption of those that have been extravasated, commences in the areolæ of the nucleus, and of the surrounding parts; the stagnation of blood disappears; the effused blood is absorbed, the whole part again passes to the healthy condition, the resolution is completed, and no organic alteration remains behind.

But if on the other hand the congestion has been excessive, and all the cells of the part fill freely with blood containing no fibrin and coagulating, a motionless state ensues, the communication between the part and the current of general life flowing through the nerves is cut off, the fluids are no longer changed, the part dies and falls into gangrene: this last is limited by an inflammation which is for the most part defined.

If the congestion is not so great, the inflammation, after a certain time, losing its activity, a pure and simple resolution does not take place, but in lieu of it a resolution with decomposition of the fluids: pus is formed; so soon as this occurs the inflammation diminishes in intensity. If the part is permeable and has excretory canals it is frequently evacuated by those routs; if it is not, the pus collects into a centre, forces a solution of continuity and abscesses. Sometimes when the inflammation exists in mucous tissues, the secretory apparatus of the inflamed part is endued with the irritative action, and secretes a copious puriform mucus in order to the resolution of the inflammation.

Suppuration, however, is not always the termination, as may be seen when the inflammation existing in two opposite surfaces, the matter that exudes becomes organized, and establishes a continuity between them: this is one species of resolution. But if during the organization of this matter a fresh afflux of fluid takes place, the process is interrupted: a liquid, limpid, or turbid from the detritus of the exudation, sometimes purulent, separates the surfaces and forms an effusion. At other times, while the inflammation is continued during the absorption of the serosity that has been separated from the exudation, the solid matter of the latter may become dense, compact and organized in the shape of a false membrane, whence a true cicatrix arises.

Lastly, extravasation and incomplete stagnation of blood may occur in the areolæ of a part, without the total isolation of the effused fluid from the circulating mass that happens in gangrene; this is red induration, a kind of phlegmasia that becomes chronic if the individual survives.

Inflammation frequently leaves behind it

various kinds of alterations, such as superficial red granulations, false membranes, chronic effusions, vegetations, &c. Within the inflamed part fibrin is retained which becomes organized, and produces different kinds of organic alterations, such as hypertrophy of the whole organ, an alteration of the secretory apparatus, which instead of its natural fluid gives out pus or its own fluid in a depraved condition—either decomposed or sanious—and forms foreign bodies. Sometimes demolition of the organ ensues, which from a chronic inflammation suppurates, and in doing so is disorganized, and produces a kind of ulceration; the prolongation of acute inflammation generally has some such result as this.

Inflammation may also, without destroying the organization of the parts, leave their tissues in a state which deranges their functions: leaves, for instance, their nervous capillaries or papillæ in a pathological condition that induces particular phenomena: leaves the ganglions and the areolar and lymphatic tissues in a state of irritation, which after appearing to commence in the blood vessels during the acute stage, remains in the secondary tissues, and becomes chronic. *This constitutes sub-inflammation*, which in this case is only degenerated chronic inflammation—though such is not always its origin, for it may be primarily established. In fact, we are so organized, that irritation may be developed in the lymphatic, areolar, secretory and excretory systems, establishing therein an abnormal movement that tends to a deranged nutrition and the decomposition of our organs, without its ever rising to the degree of inflammation. This irritation is, however, always ready to rise to that degree, and we may indeed affirm, that every chronic irritation has a tendency to become acute, or even that every such *will* end in acute inflammation, unless it be properly treated. This is one of the most important truths of the physiological doctrine, and without a recognition of which it is impossible to be a judicious practitioner.

Such is a summary idea of inflammation viewed in its local character. But other considerations are attached to the subject; this inflammation influences the organs, it rarely enjoys a purely independent progress, unless it be extremely limited as in the instance of a very slight eruption, a passing erythema, a sty, or a simple pustule; while he who has had an inflammation in one part of the skin is liable to its re-appearance in some other part of it. Inflammation then, is rarely absolutely isolated; a simple prick of a pin often causes disorder at some distance, influencing the neighbouring organs by the propagation of the inflammation it induces; in this case there is a degree of pain which connects the movements of these organs. Suppose a woman seized with violent inflammation of the vagina; she would be consti-

pated, for the rectum would no longer dilate with the same facility. Is there inflammation of the pleura, immediately you may remark the immoveability of the intercostal muscles. Hence the origin of numerous phenomena; first there is propagation of inflammatory action in the immediate vicinity, and then, in consequence of pain, immoveability of the neighbouring organs whither the inflammation tends.

Thus, you observe one first influence of inflammation on other organs than those in which it is seated. By what medium is this influence exerted? by the medium of the nervous system. Does any moderately active inflammation involve the nerves of a part, those of the neighbouring parts communicating with them transmit the pain from one to the other; if one of your fingers is inflamed, the next fingers pain; if you have the tooth ache, more or fewer of the teeth also ache; is there an irritation of the nipple, the secretion of milk is altered; or of the bladder, the functions of the kidneys is disordered, and the urinary secretion depraved; if of the mouth, the salivary glands will cease to furnish the same healthy saliva as before. Influences such as these may be exerted on the neighbouring parts by means of nerves, without any disturbance of the powers, and without the participation in them of the brain and spinal cord. But if they become more intense, the disturbance may include the whole system; the nerves propagating to a considerable distance the stimulation of the morbid part, the spinal cord becomes the chief conductor of it, and the brain itself will be involved in the circle of transmitted stimulus. How are we to prove that such is the mode of proceeding? this is not difficult to do. You have only to divide the principal nerve of an external part, and then induce inflammation in it, and you will find that it remains purely topical and is no longer transmitted; you have only to disperse the congestion of an important organ in a state of inflammation, and the sympathetic phenomena will soon decrease and be finally extinguished. A man comes to me with a violent inflammation, producing an action on the brain and spinal cord, and causing subsultus of the limbs; I attack the inflammation and the twitchings disappear; the following day this patient commits some error in diet—immediately the subsultus returns. Facts of this kind are numberless. But this is not all; when irritation is thus disseminated by the nerves, other disorders than those of transmitted pain and of convulsions and spasms are produced. The heart contracts once or twice more rapidly than in the normal condition; the whole animal economy is deranged, and what is called fever is lighted up in a degree proportioned to the extent and vitality of the inflamed surfaces. The more nerves and vessels that are attached to an organ, and the more close and immediate the communication with the nervous centres of

transmission is, the greater is the disturbance. You see this in pulmonary inflammations, in phlegmasiæ of the digestive canal, which is seven times longer than the body—no wonder that a new disorder is induced.

The acceleration of the progress of the blood causes all the organs to receive more of it than ordinary. The respiration is necessarily precipitated in order to effect a more frequent oxygenation. If there are organs in a fit condition to retain it, the blood forms congestions in them that irritate them, as we see in individuals who previously had latent inflammatory points, and who in other respects were in tolerable health. When such persons are once involved in the febrile state, the points that were hitherto but slightly congested, become gorged, and suddenly inflame in consequence of the more vehement nervous excitation, and the more rapid current of blood; so that though they were passably well a few days before, having several latent, circumscribed phlegmasiæ, they are suddenly hurried on to the last degree of danger. Unless the physician who witnesses such apparent anomalies is accustomed to apply his powers of mental analysis to disease, he can never succeed in clearing up the chaotic disorder of it.

Further, the whole muscular apparatus is out of order; all the secretory actions are deranged in their action, and furnish diseased fluids—a circumstance that led the ancients to believe that the blood was corrupted in fever—and in fact all the chymical combinations are then overthrown; the whole economy is changed on the advent of any extensive or vehement inflammation. At the commencement, the process of nutrition in the inflamed organ is augmented, and when it has arrived at a certain point, disorganization takes place, it takes a retrograde course, and finally stops altogether. Should the organ be an important one, it deranges the composition of all the others, and nutrition is languid throughout the system; the process of decomposition predominates in the shape of excessive evacuations and disorder of the great viscera, emaciation progresses, and the patient slides into marasmus.

Such then are the principal phenomena of inflammation.

The influence of inflammation on other organs than that in which it is seated is, as we have seen, referable to four means of transmission.

1. By propagation: this is the most simple fact.
2. By community of nerves; pain and the immoveability of parts supplied by the same nerves is the first consequence.
3. By compression on the neighbouring parts; this may produce extravasations, disorganization, new tissues, &c. &c.
4. By transmission and dissemination by

the medium of the nervous system, which is indeed the means of communication between the vital phenomena of movement and sensation, just as the vascular system is that of circulation of the blood. I call your particular attention to this fact, for I believe that reflexion on it has caused the formation of the majority of judicious observers and most able physicians.

We have seen then how inflammation in the first place transmits irritation to a short distance by the nerves: of this I gave you several examples. In all these transmissions there is a remarkable phenomenon that ought not to be passed: it is, that at a certain degree of intensity, they cause an augmentation of the quantity of fluids furnished by the secretory organs, while, at another and stronger degree, they suppress them. In slight or incipient cystitis there is a more copious flow of urine: when it becomes intense it is suppressed. The same obtains in gonorrhœa. Inflammation of the stomach augments or arrests the flow of saliva, according to its intensity. Such is also the case in inflammations of the digestive canal: if slight they induce a more abundant flux of bile to themselves; if vehement, they stop its secretion. I have seen individuals that were subject to a considerable secretion of semen in whom an urethritis altogether put a stop to it.

In the next place, inflammation is transmitted throughout the entire system by the nerves; and when this is the case, the nervous centres take a part in the transmission; the stimulation then travels along the nerves, is reflected on the encephalo-spinal apparatus, and produces its various effects. One of the foremost of these is the increase of the heart's action or fever, which is by no means a necessary phenomenon in inflammations; for when these are limited, they pass through their phases without causing, without inducing any fever; and if, when they are extensive, the physician reduces them within certain limits, the movements of the heart cease to be hurried, and the fever stops. Thus it is only a sympathetic effect of inflammation, the only exception being the instance when the heart itself is inflamed.

The irritation once arrived at the great nervous centres, and spread thence over the organism, producing increased frequency of pulse, the process does not stop there. It turns off to the muscular system, and causes lassitude thereof, as may be proved by the possibility of diminishing or increasing the latter at will, by merely diminishing or increasing the activity of the inflammatory focus. On the other hand, it re-acts on the secretory parts, and causes the changes of fluids already mentioned. These changes vary according to a multiplicity of circumstances—according to the quantity of blood collected in the secretory organs, the proximity of the focus of inflammation, according

as the organ itself, or a portion of it, is the seat of that phenomenon, &c. &c.

Inflammation moreover re-acts on the two great functions of digestion and respiration. When an inflammation is sufficiently intense to affect the whole body, digestion suffers, and the appetite diminishes even though the stomach be not the seat of any inflammation whatever. Digestion may however go on if the influence be not too powerful: in the contrary case, digestion and appetite are arrested, and the stomach may even become inflamed. This takes place with varied rapidity, and the same stimulus deranges it more rapidly and more seriously in some than in other individuals; hence you see some who labour under inflammatory affections retain their appetite much longer than others similarly situated. What has been said of the stomach is applicable to other organs, to the lungs, as I have said, and to the brain. When the circulation is accelerated by the impulse of some centre of inflammation, and the nervous irritability is augmented throughout the nervous system, in consequence of the dissemination of the irritation, many organs that were not previously irritated become so, and you will see two, three, or four intense inflammations ensue upon a single inflammatory point.

In consequence of all these re-actions, and of this general disturbance, nutrition is deranged, because there is less reparation and more loss than in ordinary circumstances. The body becomes thin, while the inflamed part hypertrophies; but this hypertrophy does not continue beyond a certain degree of irritation, and thickening, suppuration, effusion, and every kind of disorganization follows it. Yet it is not less certain that if only a moderate degree of stimulation prevails in the organ, it undergoes an actual augmentation of volume without disorganization, and at least with a very slight alteration.

LECTURES

ON THE

PHYSICAL EDUCATION AND DISEASES OF INFANTS,

FROM BIRTH TO PUBERTY.

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LECTURE XXXVII

Petechiæ—Cyanosis—Lentigo—Ephelis—Chloasma—Aurigo or Icteritia—Kironosis.

GENTLEMEN—I shall now proceed to refute M. Andry's opinion that the fœtus in utero cannot labour under small-pox or other contagious diseases.

In an essay entitled "Observations on the Effects of Variolous Infection on Pregnant

Women," by George Pearson, M.D.F.R.S. Physician to St. George's Hospital, from the *Medical Commentaries*, vol. xxix, p. 213, will be found ample evidence, which I shall quote at length.

In April, 1793, I was requested to direct and attend the inoculation of the poor people in Weybridge, Walton, and other places adjacent to Oatlands. On this occasion I had under my care 215 patients, who were inoculated in May and June last, by Mr. Norman, Apothecary to the family of His Royal Highness the Duke of York. I attempted to avail myself of this opportunity to make observations, with a view to determine the circumstances which render the inoculated small-pox more or less severe; for the most experienced and judicious physicians do not agree with respect to many of the circumstances which have been generally alleged to influence this disease. But the observations in the present paper relate only to the small-pox in pregnant women.

The action of the variolous matter on the animal economy, is an interesting object of contemplation to the cultivators of natural science as well as necessary to be understood by physicians. It is supposed that the following statement of cases and observations may tend to elucidate a part of this subject, which has been hitherto but little investigated.

Case 1.—Mary Sheers, twenty-five years of age, the wife of a labourer, a moderately strong and healthy woman, had borne four children, the youngest of which was two years of age. According to her reckoning she was now in the beginning of the eighth month of her pregnancy. Having been directed to abstain from much fermented liquor and much animal food for about a week, and having during this time taken a mildly operating cathartic, she was inoculated on each arm on the 7th of May. The patient was ordered to observe the regimen just mentioned, and also to expose herself much in fresh air. On the 11th of May, the fifth day, including the first after inoculation, both arms were inflamed in the manner they usually are when the infectious matter produces the small-pox. Although there was no complaint made, it was thought advisable to draw off ten ounces of blood, which was very sizey. On the eighth day after inoculation, febrile symptoms appeared, namely, sensations of coldness and heat alternately, great lassitude, pains in the head and back, and frequency of pulse. On the ninth day the feverish symptoms were more severe, and on this day also some eruptions appeared. The day following, namely, the tenth, the fever had almost entirely disappeared: a great number of eruptions were seen—the eruptions, in number perhaps 12 or 1400, gradually increased to their usual size, in the distinct and regular small-pox; then suppurated; and on the fifteenth day were almost all drying up. No fresh symptoms had supervened, except a little difficulty in degluti-

tion, and a slight sore throat on the twelfth, thirteenth, and fourteenth days after inoculation.

By the twenty-third day the scabs from the small-pox had fallen off, and the patient was quite well. Notwithstanding the number of pustules, the patient had not been confined to her bed for more than one day before the eruption: but I had reason to believe that she had not been obedient to directions, for she had kept herself in hot and confined air.

The subject of our observation continued well till the 4th of June, which was the twenty-ninth day after inoculation, and the twenty-first after the eruptive fever; and she was delivered of a full grown dead child. To judge from the woman's feelings, her *fœtus* had been dead four or five days before it was brought into the world. On the 6th of June Mr. Keate and myself were at Oatlands; and hearing that this child was born with the small-pox upon it, but that it had been buried two days, by permission we took up the body, in order to judge by actual inspection of the appearances of so curious a fact. Neither of us expecting the account given to be founded on any strong proofs, we were not a little surprised the instant we saw the *fœtus* with the numerous pustules upon its skin, resembling exactly those of the small-pox, about the fourth day after the eruption in the favourable kind. These eruptions differed, only in being flattened, from the small-pox in the living subject. There must have been I think in number about 400. Presuming that putrefaction had begun to take place, it seemed probable that the matter of these pustules would not be infectious. As no serious consequence was apprehended from the trial to inoculate with it, Mr. Keate collected a little of it upon a lancet. Mr. Keate informs me, that on Saturday, the 14th of June, he inoculated with the matter of the dead *fœtus*, a girl of about nine years of age, from 42, South Molton-street. There was not the least reason to suppose she had gone through the small-pox. Mr. Keate observed that inflammation came on in the part inoculated in two or three days, as it usually does when the infection produces the disease: and that on Wednesday, the 19th of June, the fifth day after the insertion of the matter, there was a pretty extensive circular inflammation, and a small vesicular tumour of the arm where the puncture had been made. Mr. Keate observed the inflammation and tumour to increase for several days farther. On Sunday, the 23d of June, the ninth day after the incision, the patient called upon me. I could not discover any disorder of the constitution in general; nor did I learn that she had been affected by the slightest febrile complaints. There was, however, a tumour as large as a pea, full of matter upon the part which had been punctured, and a circular inflammation about this pustule. The aspect of the arm was exactly that of a part infected by the va-

riolous poison where eruptions are present. On Tuesday following, now the eleventh day after inoculation, Mr. Keate observed the inflammation to be upon the decline, and the pustule beginning to dry, therefore he conjectures that the disease was at its height the day before—that is, Monday, the tenth day after the incision; for in a few days the patient got quite well; a crust of slough leaving a scar as after inoculation where variolous pustules had appeared. As there was no observable fever or eruption in this case, Mr. Keate inoculated this girl twice within six months afterwards, and at each time two other children with the same kind of matter on the same lancet. The two latter went through the disorder in the regular way, but on the former these inoculations had no effect. He also again inoculated the girl on whom the matter from the dead foetus had been tried, but, as before, no inflammation or swelling ensued: nothing followed but a red line or a red spot for a day or two, according to the scratch or puncture that was made. In course the remaining scar was from the first inoculation with the matter of the dead foetus. Mr. Keate observed that in several cases of inoculation in the beginning of June last, local effects only were produced as above described; he could not help suspecting that the air at that time, which was very hot weather, had some influence, in rendering the small-pox so mild. On inquiry of several practitioners, and from cases of natural and inoculated small-pox, which fell under my care during the hot weather last summer, I was well satisfied that this disease was not more violent, but perhaps less severe than usual, provided the patients admitted were exposed to a succession of hot air. Perhaps it may be just worthy of notice, that the husband of Mary Sheers, was inoculated, and two of their children at the same time with herself; that he had the disease slightly, having only twenty eruptions; that one of the children had also twenty eruptions; and that the other child had inflammation and suppuration of the part inoculated, but no eruption, nor, I believe, fever; but we have seen that the mother had a pretty numerous crop of pustules as well as her foetus.

Case 2.—Mary Spoon, thirty-two years of age. She had six children, the youngest of which was two years old; and supposed herself to be in the sixth month of her pregnancy. She was inoculated in one arm on the 4th of June. The same regimen and medicines were prescribed as for the above patient, Mary Sheers. The inoculated part became inflamed and swelled in the usual manner when the variolous matter applied produces the small-pox. And symptoms of fever appeared on the 12th and 13th of June, viz. on the ninth and tenth days of inoculation. The eruption began to come out on the 15th of June, or the eleventh day after the inoculation. She had a great number of pustules; at least, 1500

or 2000: but there was no secondary fever; and she went through the stages of suppuration and dessication without suffering considerably, or having any unusual symptoms. This woman enjoyed good health during the rest of her pregnancy, and was delivered in the beginning of October of a healthy full grown child. It was inoculated in both arms when about eight weeks old, by Mr. Norman, with matter from a subject in the same room with it. The arms were seen a few days in the manner they most frequently are when patients are infected. The child sickened on the 8th day; and at this time the parts inoculated were swelled, and there was a little suppuration in them. No eruption ensued. On the 12th day the inflammation had greatly abated, or almost disappeared. On one arm in the part inoculated there was a round hard scab; and on the other arm, a crust from the inoculated part had sloughed off and left a cicatrix. As there had been no eruption, and as unfortunately the opportunity was lost, of taking matter from the suppurated parts, no other way remained of determining whether the child had been infected, but that of again inoculating it. This I did with fresh matter applied to both arms on the 2d of January last. I examined the child on the 6th, but so far from any inflammation having taken place, there was scarcely a vestige of the punctures remaining; nor was any thing seen afterwards but a red mark in each of its parts pricked by the lancet. At this time the scars from the first inoculation were as distinct as ever, but no marks remained from the second inoculation.

The numerous records of inoculation for the small-pox, contain but little information concerning the effects of it in the advanced periods of pregnancy. And it seems highly probable, that not much would have been known of inoculation in the earlier periods of pregnancy, if the subjects had not concealed or been ignorant of their being in this state. The opinion, that it is most dangerous to inoculate in every stage of impregnation appears to be founded on reasoning and extensive experience of the fatality of the natural small-pox, during the whole of utero-gestation. But from a pretty considerable number of instances which I can adduce, it seems that the inoculated small-pox, within the sixth month of pregnancy, is very seldom fatal to the mother, although it very frequently kills the foetus. Hence, I apprehend that the practitioner who should not inoculate in these states of pregnancy, under the circumstance of unavoidable exposure to infection, would be deemed as unskilful or culpably timid, as he would be accounted ignorant or rash who should inoculate in the absence of the circumstance of present infection. On this ground the justification of my practice in one of the above two cases is founded; namely, in that of Mary Spoon, who was a little more than five months gone with child.

And with regard to the other case, in which the woman was in the eighth month of pregnancy, although I then knew of only one instance of inoculation at so late a period, viz. a case by Mr. Quier, which terminated favourably, yet I considered the practice to be justifiable, because in about twenty cases to which I can refer of the natural small-pox, under similar circumstances of pregnancy, the disease proved fatal to three-fourths, or four-fifths of the women, and to a still greater proportion of the fœtuses. These two cases then, may serve as useful data in practice, in judging of the propriety of inoculation in the two last months of pregnancy; with regard to the small-pox having taken place before birth. In one of the cases above related, the woman was delivered of a fœtus with eruptions upon it, exactly like those of that disease, and the effects of the matter of these eruptions on a person who had not had the small-pox, afforded a strong, if not an unambiguous proof that this infectious disorder took place before birth. I remained, however, in a state of hesitation with respect to the infectious nature of the dead fœtus, until I had well considered the circumstances of the case, and compared this case with those of the same kind which are on record, or have fallen under the observation of other practitioners. The evidences of a disease being the small-pox seems to be the following:—1st. Certain symptoms and appearances observed only in particular stages of the disease. 2d. Certain symptoms which occur in succession. 3rd. Scars in the skin after the disease. 4th. The constitution not being after the disease susceptible of the small-pox from the insertion of variolous matter. 5th. The matter of eruptions producing the small-pox in other persons.

Now, as the small-pox may take place, and the peculiar symptoms in succession not be present, nor scars be left, and as the other proofs are equivocal or not in every case present, it follows that cases may occur in which it is impossible to determine the question at issue beyond the reach of doubt. For even the last proof mentioned is sometimes undecisive, as I will make appear by two instances.

Case 3.—In the year 1713, Mr. Derham, F.R.S., upon the authority of a midwife, gave an account to the Royal Society (Philosophical Transactions, vol. xxviii, p. 165), of a woman who when in a very advanced state of pregnancy had the natural small-pox very mildly; but, while taking strong purgatives as soon as the disease was over, the fœtus, according to her feeling, died; and in five days after its death, she was delivered of a dead child, whose skin had upon it a vast number of the suppurated small-pox.

Remark.—The small-pox eruptions, when very numerous and full of matter, are so very unlike any other known disease, as not to be easily mistaken by a nurse or midwife; and the delivery took place after the disease in

the mother, consistently with the action of the infectious matter upon the fœtus, as in several other cases.

Case 4.—An account is given in 1749, by Dr. Mortimer, Sec. R.S. (Philosophical Transactions, vol. lxvi, p. 233), of a lady who, when within a fortnight or three weeks of her reckoning, had held a conversation at the distance of thirty or forty yards with a person then in the small-pox, in the state of maturation. In a fortnight after this interview, the pregnant lady was delivered, and her infant was in a day or two covered with eruptions, which proved to be the small-pox, of which it died, before the period of maturation. The mother had no complaint or eruptions; and she had the small-pox long before.

Remark.—I apprehend that practitioners in general, will not conclude that in this case the fœtus was infected in the womb; because many hundreds of pregnant women in England yearly, are exposed to the influence of the variolous infection, under much more favourable circumstances for its action, than in the present instance; and there is no parallel to this case, I believe upon record, nor has any parallel been heard of. Besides this, the eruptions had not suppurated, and perhaps were not numerous. They might probably be from a different disease; or if from the small-pox, the source of the infection was not that alleged. Much as this case stands in need of confirmation, the authority for it was so respectable as to require my notice.

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MEDICAL REFORM.

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To the Editor of the London Medical and Surgical Journal.

SIR—There is no engine more powerful, or of greater utility in the promulgation of opinions, or the advancement of literature and science, than the periodical press, particularly when directed by a master-genius, who permits not the trammels of prejudice to fetter his judgment, nor allows his noblest prerogative of reason to succumb to the ascendancy of factious opposition. To you Sir—one of the ablest and most independent conductors of one of the most powerful and independent medical periodicals of the present day—the medical profession (especially the class called general practitioners) owe a deep, a lasting debt of gratitude. You have contributed to raise them, as it were from a species of degradation in which they were enthralled, and your editorial labours in their cause, have opened to view a new and brilliant era in the annals of their history. They are at length dispelling that dark and drowsy stupor, with which the narcotism of ignorance had clouded their energies, and which had placed a spell upon the development of their mental faculties. They are

now occupying a prouder position in the estimation of society, and the present race of general practitioners may be justly pronounced to be among the most scientific and enlightened of any of the cultivators of medical science—yet it must be candidly acknowledged, that they are even now, much below what they ought to be. To you then, as the professed advocate of medical reform, I shall offer no apology for addressing the following humble remarks.

The reformation of existing abuses, Sir, has ever been considered among the most important duties of those who are interested in the welfare of society—to eradicate those rank and noisome weeds, which in their dark and malignant luxuriance, check the development of the beautiful flower and its growth to maturity, must be regarded as an occupation of no ordinary character. The medical institutions of this country seem to me to require a powerful remodelling agency, in order to adapt them to the advanced state of medical science, and the improved state of society. It appears to be a singular anomaly, and entirely incapable of demonstration on the ordinary principles of logical science, that a few self-appointed individuals should have the sole power and educational management of a multitude, their equals in rank, and frequently their superiors in scientific and general acquirements. It may be aptly compared to the hydrostatical paradox of philosophers, by which a small proportion of water is made to balance a quantity however large. *Sed hæc hactenus.* I would propose that there be established a consolidation of the English College of Physicians, Surgeons, and Society of Apothecaries, which might then be denominated the English College, Academy or Faculty of Medicine and Surgery. The same might also take place in Ireland, and a similar mode of procedure might be instituted in Scotland. The examiners of these respective academies, should be selected from the most eminent and scientific physicians, surgeons, obstetricians, and apothecaries of the present day, and should be chosen solely by their acquirements, which might probably be sufficiently ascertained by their individual literary productions, and the eminence which they occupy in the estimation of the profession. These are to possess the power of first conferring an incipient degree of qualification, before the candidate commences his medical studies, and subsequently the degree of doctor. I would further propose then, that the youth intended for the medical profession should leave school at about the age of eighteen. He should then be required to undergo an examination as to his proficiency in the Latin, Greek, French, German, and Italian languages, and the elements of mathematics, &c. If he be found sufficiently acquainted with these important accessories

in the acquisition of medical knowledge, he should be apprenticed for the term of five years to a respectable practitioner—I say apprenticed, for I am an advocate for the apprenticeship system. I think where the preceptor is a scientific man, and will carefully direct the studies of his pupil, and permit him to attend lectures during that period, that it is powerfully conducive to moral as well as professional improvement. After the expiration of his apprenticeship, and a prescribed course of lecture and hospital attendance, he might then present himself for examination, and if found qualified, might receive the degree of doctor, and might afterwards confine himself either to the practice of medicine, surgery, or obstetrics (for a division of labour should always be encouraged, as more calculated to improve the individual sciences), or all in conjunction, if he thought proper. The examinations for the degree of doctor might be held annually, and should be long and minute on the various branches of medical science. I would not only have our faculty or academy endowed with the power of conferring the degree of doctor, but also honorary degrees in medicine, surgery, and obstetrics, for which all qualified for the doctorship might compete if inclined, by public examination. We have our Wranglers and Optimes at Cambridge, and why should not our medical faculty have the power of conferring similar honours? I would have instituted three kinds of academical honours, viz. for medicine, for surgery, and for obstetrics, so as to give the candidates an opportunity of distinguishing themselves, in each or all of the most important branches of the profession. There should be a graduated scale of fees, and each doctor should be permitted to dispense his own medicines; for it is a point admitting of no controversy, that every practitioner should know that the medicine he prescribes is genuine. How can he tell that it is pure, especially in this age of adulteration, unless it be dispensed under his own superintendence? I believe this to be the reason why the prescriptions of the most eminent physicians are so often found to be inefficient—and this latter fact will completely substantiate the validity of my position. The limits of a letter will not permit a more minute expatiation on the most efficient plan of medical education and reformation, which might be advantageously adopted in this country; but I humbly think, that if a system constituted like the one I have recommended, were brought into operation, it would be greatly conducive to the welfare of humanity, and add considerably to the dignified character and respectability of the medical practitioner. Sir, the refinements of modern times, and the rapidity with which education is advancing, demand that a corresponding advancement should take place in the learned pro-

fessions—and especially in the medical profession, where every mental faculty is so frequently called into operation, and required to be exerted to its fullest extent. At a time too, when the lowly mechanic threatens to overtake the member of a more exalted stage of society, in the acquirements of science and philosophy—it is time that those who have been hitherto intrusted with medical education, should make wholesome and beneficial changes in their chartered institutions—that they should enlarge the sphere of scientific acquisition necessary to become a member and should render the avenues to the profession more difficult to pass through, by the establishment of a more rigorous and emulative system of examination. Sir, it is surprising that medical men are so well informed as they are, when we consider the almost monkish ignorance and darkness, which cloud these institutions, which are now the sole arbiters of medical acquirements, and which they are expected to regard with paternal veneration. These institutions, individually, are so deeply enveloped in the gloominess of barbarism, that it would be utterly impossible to support their pretension to the respect of the profession, unless it were attempted in that sophisticated garb in which a false and specious philosophy clothes its speculations. Still dark as the chaos from which they first sprung into existence—the sun of science deigns not to beam upon their portals. Sir, I am not one of those who would wish to behold all that is useful and venerable in our country sacrificed on the altars of change and speculation—oh no! I could not bear to view the giant hand of desolation passing through the land, and carrying destruction at its every grasp—but I wish to see effected such alterations as will increase the dignity and respectability of a profession which I hold in the sincerest esteem and veneration. It was a brilliant era in philosophy, when the rational inductions of a Bacon subverted the syllogistical mysteries of an Aristotle, and when the mighty genius of a Newton burst asunder the fetters which nature had placed upon the finite conceptions of man! It was a brilliant era in the science of astronomy, when the simple and sublime system of a Copernicus superseded the ethereal illusions of a Descartes—and it will be a brilliant era in the science of medicine, when it is placed upon a basis which has for its object the welfare of humanity, and the advancement of the education and interests of its professors. I am, &c.

A GENERAL PRACTITIONER.

St. George's in the East.

May 23, 1835.

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Foreign Medicine.

M. Rostan's Clinical Lectures on the Lesions of the Nervous Centres, continued from p. 504.

Lesions of Sensibility.

PREVIOUS to describing the different modifications that sensibility is liable to undergo, it is better to inquire, in the true spirit of organic medicine, what organ or what portion of an organ presides in the fulfilment of this important function; and first of all, it is necessary to ask whether any distinct organ for the evolution of the phenomena of sensibility exists.

Medical observers have in all times certified the possibility of movement being deranged without any affection of the sensibility, and that the latter may be annihilated while movement remains. Hence it may be deduced that a distinct organ for the phenomena of sensibility really exists; and numerous researches have been made for the purpose of detecting its position in the great nervous masses, which researches have led to the knowledge that the posterior portion of the spinal cord and the cerebellum communicating with it by means of the restiform bodies, are essentially concerned in the actions constituting sensibility. Very many facts support this idea, although contradictory observations are cited, which still cast doubts on the point in question. Yet, as it cannot be denied that there are nerves for sensibility as well as for motion, and that these nerves originate from a particular portion of the nervous centres, the admission is equivalent to that of the existence of a distinct organ for producing sensible actions.

After several exceedingly curious physiological reflexions on the brain, M. Rostan proceeded to consider the perversions of sensibility in disease. He stated that obliteration of movement is more frequent than abolition of sensibility, and called to mind that this abolition may depend either on a modification of the sensitive extremity of touch, on the conductor nerve, or on the centre of perception. In some diseases of the nervous centres, there is exaltation of sensibility, a phenomenon by no means rare in hypochondriacal subjects, hysterical females, &c., as well as in other cases. Thus, M. Rostan has been for a long time in attendance on a gentleman, who, though suffering from racking head-ache and hemiplegia, exhibits a remarkable exaltation of sensibility in the paralytic side, accompanied with obstinate redness of the skin of that side alone. Inspection after death will disclose in this individual some alteration of the encephalic matter; but with our present knowledge it would be impossible, from the mere exaltation of the sensibility, to point out, with any accuracy, the seat and the nature of this alteration.

The numerous modifications which sensi-

bility undergoes in cephalic diseases, are, however, occasionally sufficient to establish the diagnosis. Thus, lancinating pains of the head, and similar pains affecting the paralysed limb, may lead to the detection of congestion of the brain and its softening. The diminution and abolition of sensibility are always characters of a compressed state of the encephalon, and according as they are general or partial, the extent of the cerebral lesion may be determined. On this subject M. Rostan related the following curious case:—A young lady residing at Brazil fell from a horse, but had no recollection of the circumstances attending the fall. She was immediately seized with violent lumbar pains and distressing palpitations of the epigastrium: she also experienced a total loss of sensibility of the external surface of the right thigh. After in vain trying various means to obviate these symptoms, she came to France. The diagnosis of this case is very difficult: the mischief arises most probably from a complex alteration; and though it may be correct to attribute the main symptoms to a myelitis, the loss of the sensibility of the thigh seems to be more particularly attributable to some lesion of a nervous branch.

The lecturer then proceeded to consider the particular histories of the diseases of the encephalon, commencing with—

Sanguineous Congestion of the Nervous Centres.

This is the most simple of encephalic disorders, and consists in the afflux of a varied though considerable quantity of blood to the contents of the cranium. It has received various appellations, which however should not be used indiscriminately, for, be it remembered, the terms cerebral plethora, encephalic hyperemy, apoplexy, are not indifferently applicable to all the cases of encephalic congestion. Previous to 1812 this morbid state was confounded by the majority of pathologists with the other acute affections of the brain, whence arose considerable obscurity in the manner of studying them, and great difficulty in the establishment of therapeutical indications: subsequent inquiries have remedied this.

According to M. Rostan, at least two kinds of encephalic congestion should be admitted; one slight, temporary, of minor consequence—this is cerebral plethora or hyperemy: the other, more decided, sometimes long-continued, and of serious import—this is apoplexy (*coup de sang*), or congestion properly so called. This is by no means a scholastic and useless distinction, for it aids the investigation of the disease in question, and facilitates its treatment.

Cerebral plethora or hyperemy may be direct or indirect, simple or complicated, that is to say, it may come on primarily, spontaneously, independently of all remote organic modification, or secondarily, in consequence of an affection of some organ va-

riously distant from the brain. It is known by the following signs: its invasion is most frequently sudden, and characterised by the appearance of flashes or sparks to the sight, as well as other disorders of vision, such as vertigo, distressing and painful impression of light, and, according to some authors, the red colouring of all objects submitted to the sight: the existence of this symptom, however, the learned lecturer doubts. Peculiar sounds, whistling, drumming, noises of beating, synchronous with the contractions of the ventricles, and the diastole of the carotid arteries, incessantly distress the patient. A momentary deafness is also apt to occur, and to be complicated with blindness; sometimes, on the contrary, the slightest noise suffices to enrage the patient. Occasionally there is exaltation of the intellectual powers, but more frequently they are oppressed, and the patient falls into a state of actual stupidity, the slightest occupation requiring any attention being dreadfully fatiguing. Delirium can scarcely be said to characterize this disease. Motion is ordinarily laboured and difficult: the patient moreover has the sensations of creeping, pricking, and cramps of the limbs. In the majority of cases the tendency to sleep is manifest; sleeplessness is rare. The face is generally tumefied and red: the eyes starting and suffused: the lips red, enlarged, swollen, and shining. The skin has a vaporous heat: the subcutaneous veins are large, swelled, and resist pressure: the temporal artery beats with vehemence, and is greatly expanded to allow the passage of the blood: yet the thirst is but slight, the tongue is moist, the appetite tolerable; there is no pain of the abdomen, but the fæces are for the most part confined: the impulse of the heart's contractions is increased. Such are the phenomena of cerebral plethora or hyperemy.

In apoplexy and encephalic congestion, which may be preceded or not by hyperemy, there is complete, sudden, instantaneous suspension of the functions of relation; the patient falls into a decided state of general insensibility and absolute loss of motion. This mostly pervades the whole system; the face is swelled and livid, the eyes half-closed and fixed, the lips projecting and blue, the respiration stertorous. The skin is hot and injected, particularly about the head; the pulse strong and large; vomiting sometimes comes on, but it is only a sympathetic effect, for there is very rarely any other disorder of the digestive organs to accompany it. In some infrequent instances patients have remained in this apparent state of utter annihilation of relative life, and yet were capable of understanding what was passing around. Cerebral congestion is likewise sometimes accompanied with paralysis of the limbs of one side alone. In these cases M. Rostan thinks it very possible that the brain may be more strongly congested on one side than the other; for it may happen

oxysm, or occurring when no gout is present, general bleeding is to be employed as in any other case, according to the force of the symptoms, and the powers of the individual constitution. Also, if there be, at any time, well marked symptoms of congestion in any organ—in the brain more especially—blood should be taken away freely. If general plethora be very manifest, in conjunction with a strong pulse, indicative of good power in the system, bleeding may be practised, with a view to lessen the quantity of the circulating blood. This method of practice is to be distinguished, I repeat, from the use of bleeding as a remedy for the gout in the extremities, which it would rarely tend to remove.

“ Nor is local bleeding by leeches so successful as we might be led to expect. It is much more so in rheumatic inflammation. It is often disadvantageous, and occasionally even injurious, in acute gout; rather aggravating than relieving the inflammation and pain. I have sometimes seen much permanent weakness of the joint produced by the free use of leeches; and, now and then, very troublesome sores follow from the bites.

“ In some instances of chronic gout, when the symptoms have possessed a more than usual local character, I have seen benefit arise from the application of leeches.

“ How entirely the inflammation of gout in its primary character may be viewed as of a peculiar kind, and entirely as the offspring of internal causes, as also its very distinct nature from common inflammation, is shewn in the practice to which I have before referred, adopted in former times, of drinking Madeira, and covering the affected part with flannel (very improperly it is true, and with the certain consequence of prolonging the disease), without producing that injury and danger which we might expect to follow from such stimulating means.

“ *Of Emetics.*—I entertain a higher opinion than formerly of the advantages of producing free vomiting, and especially at the commencement of a severe attack. Unless there are particular contra-indications, I much recommend this as one of the first measures to be adopted; and more especially when, as so commonly happens, the stomach is greatly disordered; the signs of this appearing in a coated tongue, disagreeable state of the

palate, irregularity or loss of the appetite, nausea and sour eructations, and flatulence. I have often witnessed an immediate subsidence of the gouty symptoms from the operation of an emetic. I am persuaded also, that I have occasionally succeeded in averting the threatened paroxysm, by the use of an emetic, immediately followed by a mercurial purgative, and by regulation of the diet.

“ *Of Cathartics.*—When it is considered how almost wholly a fit of gout appears to result from congestion in the abdominal viscera, more especially from a surcharge in the circulation of the vena portarum (the great vessel which carries the blood from the intestines to the liver) and of the biliary pores, we are at once led by theory to the choice of this class of remedies, and no less confirmed in its propriety by practice. It is incumbent on us to persist in acting with freedom on the bowels from day to day, so long as the alvine discharges exhibit an unnatural character, more particularly as to darkness of colour, which marks a vitiated state of the biliary secretion; or if, on the contrary, the appearance be that of clay or of leaden hue, proving a torpor of the liver; also, when the urine continues to deposit on cooling the brick-dust sediment; always having due regard to the manner in which the patient bears the evacuating treatment; for the practice of medicine is not to be conducted upon abstract principles, but relatively to various circumstances, and to none more than to the powers and temper of each individual constitution.

The superior value of a mercurial purgative in stimulating the excretory ducts of the liver, and thereby causing a more or less free discharge from the biliary pores, is familiarly known. This kind of evacuation is of peculiar importance in gout, in which disease the functions of the liver are so materially concerned. A combination of calomel with compound colocynth extract agrees with most persons; and it is often useful to add a small dose of James's powder. With some, however, the pilula hydrargyri, or the pilula hydr. submur. compos. will agree better than pure calomel. In general, it is better to administer the mercurial dose at night, joined with a little extract of poppy or small proportion of opium, directing a purgative in

the morning; which in its composition must be suited to the individual, and the circumstances of the case; and, accordingly, be rendered cordial or saline, actively cathartic, or mildly aperient.

“The dense state of the urine, its deep colour, and the remarkable quantity of brick-dust or pinkish sediment, which sooner or later in the paroxysm it deposits on cooling, is a clear indication for the employment of diuretics as a part of the medicinal plan. The carbonate of potash joined with the spirit of nitric æther, and compound spirit of juniper, diluted with water and flavoured with some pleasant syrup, usually agrees well with the gouty stomach.

“Although on the present occasion, I wish to limit myself to very general statements, and to the laying down of principles, rather than repeat any of those details which I have given in my Treatise, I will mention that as a medicine happily combining the qualities of aperient, diuretic, and sedative to the gouty action, is the draught with magnesia, sulphate of magnesia, acetum colchici, &c. the formula of which will be found in my Treatise.”

The preceding remarks are in strict accordance with the standard opinions of all judicious practitioners, with the exception of the author's views on colchicum. In this particular he differs materially from the almost universal impression in favour of the efficacy of this remedy. We believe, however, that he is quite correct in his animadversions on the excessive employment of this valuable medicine, to the exclusion or omission of proper constitutional remedies. But the author is somewhat inconsistent in preferring the acetum to every other preparation, inasmuch as he spoke in as high, if not higher terms of liquor prepared by Mr. Battley, in his late work on colchicum, about which he is silent in the production before us. He enters into a full examination of this medicine in a subsequent article, and to this we shall refer our readers for his conclusions. We now proceed with his remarks on general remedies.

“I have to observe, of the use of mercury in gout, that due care should always be observed not to produce salivation, or go beyond just making the gum sensible of its influence in any case, and in general not to this amount. I have witnessed the most

inconvenient consequences arise from the excessive action of mercury, with an aggravation instead of relief of all the gouty symptoms. It is always important that the patient, when under the influence of mercurial medicine, should most carefully guard against exposure to cold—especially cold with wet—and that his diet and regimen should be regulated with more than usual attention.

“*Sudorifics.*—During the course of acute gout, it is highly desirable that the functions of the skin should be duly performed; and when there is heat of surface, we should endeavour to procure free perspiration at intervals, and especially in the night; for in the day time, when it is our still more important object to maintain a full action of the bowels, the action of sudorifics would be incompatible.

“In strong constitutions, and when there is great increase of the circulation, the combination of tartarized antimony with the aperient medicines, or with simple salines, according to circumstances, proves very beneficial. In some cases, small and repeated doses of Dover's powder are to be preferred. When there is great difficulty of procuring the desired relaxation of the skin much advantage will often be obtained by fomenting the stomach and abdomen by means of flannel wrung out of hot water; or by substituting a very large sponge. When exposure to cold has been the particular exciting cause which has brought on the paroxysm; when the heat of the surface is irregular, and particularly when together with the gout, flying rheumatism is troublesome, much benefit is sometimes obtained from the use of a vapour-bath, administered in the patient's chamber.

“*Narcotics.*—Sydenham, in his ‘Treatise of the Gout,’ affirmed ‘that pain in this disease is the disagreeable remedy of nature, and the more violent it proves, the sooner the fit terminates, and the longer and more perfect is the intermission; and so on the contrary.’ In these terms he made a strong appeal to the judgment of the patient, that he should bear his sufferings with fortitude, and forego the aid of medicine; but I must add that, according to my observation, it rarely happens that the reward of a shorter fit and a longer intermission is thus obtained.

agony of severe gout is such that few would consent to endure it, knowing that they could procure relief from treatment.

"I am a decided advocate for such employment of opiates as may be found necessary for the mitigation of pain, and the procuring of sleep at night; and it is better to combine a sudorific with the anodine, so that its influence may be less stimulating. We make our choice between Battly's sedative liquor with tartarized antimony; crude opium with James's powder; and Dover's powder. Some individuals, from peculiarity of constitution, are exceedingly incommoded by any of the usual forms of opium, and are kept awake instead of gaining the comfort of sleep. In these circumstances, the acetate or the muriate of morphia should be chosen, which medicine has, usually, a delightful power of calming the nerves. I am in the habit of using the acetate.

"It occasionally happens that a tension of the arterial system counteracts the power of opiates to produce relief from pain; and I have seen instances in which the largest doses, which could with propriety be given, entirely failed to afford material ease. Upon the reduction of the circulation being effected by one or more bleedings from the arm, moderate doses of opiate proved quite successful.

"*Colchicum*.—Upon the real merits of colchicum as a remedy in Gout, I am anxious, after many years' study and observation of its properties and effects, to record my confirmed opinion. I conceive that there is scarcely any question in practical medicine more interesting and important than this. Its great value as a medicine is unquestionable; but I cannot hesitate to declare, that, in the injudicious manner in which it is popularly employed, it carries with it much more of bane than antidote. Without entering into a discussion at the present moment as to the distinct or identical nature of the eau medicinale, Wilson's tincture, Reynolds' specific, and wine of colchicum, I shall think it sufficient to assert, that all these medicines act so similarly on the tissues of the animal economy, as to lead us to the necessity of concluding that they are agents of precisely the same character, although having different degrees of strength;

and this I believe to be in the order in which I have named them.

"The immediate operation of the eau medicinale was now and then so violent in its effects, as to raise apprehensions for the safety of the patient; but also it was found that, when most successful in removing the symptoms, which relief was produced as if by a potent charm, the cure was only of short duration. This remedy has been laid aside for many years.

"Wilson's tincture still has its advocates; but is no longer in general use. It is less violent in its action than the eau medicinale, and certainly does, in general, exert great power over the symptoms of the fit; but with much repetition it is an injurious medicine, and also disappoints the expectations of the patient; for, with but few exceptions, it interrupts the fits without curing the disease. On the contrary, the intervals become shorter in the ratio of its employment.

"Reynolds' specific was so manifestly a preparation of colchicum in rum, that, although it had its day of popularity, it was not long preferred to the wine of colchicum. That preparation, used and recommended by the late Sir Everard Home, was for a certain period preferred; but of late years the wine of the shops, either made from the roots or the seeds, has been the active preparation of colchicum in general use. In the first edition of my Treatise, published in 1816, and in the subsequent editions, I have recommended the acetum colchici, as being, on certain grounds, entitled to preference; and to this question I shall return.

"I wish now to criticise the merits of colchicum as a curative remedy in gout.

"Of its proper and well-considered use, I am as much disposed to bestow my approbation, as I am earnest to condemn its careless employment and abuse.

"A few, but, indeed, they constitute the large minority, are attacked with so slight and manageable a degree of gout, that a few doses, at the most, of the wine of colchicum, prove sufficient to subdue the immediate symptoms. Attention being paid to the digestive organs, the patient soon recovers, and extols the happy powers of colchicum. So long as this moderate use of the medicine exerts a curative power (by which expression I mean, that the return of the disease

does not occur at shorter intervals than usual) there does not appear any reasonable ground for disapprobation of the remedy. But I would ask, how many are the examples in which results so simple and fortunate take place? The general fact is, that the colchicum alone exerts only a palliative power in gout; curative, it is true, in more or less quickly removing the present symptoms, but not curative of the causes of these symptoms, which exist in the system. Is not this truth evident, when we so continually witness the quick return of the paroxysm in the very face of the medicine; and this often to such a degree, that at length the patient has every reason to feel convinced that his disorder is only suppressed, not cured? Hence, of late years, the public opinion has been much divided as to the pretensions of colchicum, and many of those who were its warmest approvers, are now equally loud in its censure. The irrationality of pursuing a method of treatment which ends in such disappointment, is so striking, that it might appear unnecessary for the pen of the medical critic to offer his protest against it; but I am led to my present task by having witnessed very numerous instances in which the error of continually suppressing the gout by means of colchicum, as popularly employed, has been carried on even to the production of danger and death.

“Without doubt, the use of hermodactyl (colchicum) was abandoned by the ancients, from their experience of the many bad consequences which it occasioned. Before and since the time of Sydenham, there was a long interregnum, during which very little medical interference with gout was exercised. And now arises the important question—Is it safe and proper to have recourse to colchicum in the treatment of a paroxysm of gout, or not? The disease is so painful, so enervating, and so disqualifying from all the duties and the pleasures of life, that it is most natural for the patient to desire the aid of those means which he knows will afford him the most speedy relief; and, when racked with pain, he is not willing to exchange physic for philosophy, even though there may be mischief in the draught.

“With respect to the use of any medicine, it is obvious that the smallest dose

with which we can accomplish our object is the best; so far, but no farther, I am an Homoeopathic! It is equally clear, that the mildest preparation of any particular medicine, when of sufficient efficacy in the case, is to be preferred to the strongest.

“I have, in my former works, dwelt on the remarkable mildness of that preparation in the Pharmacopœia, which is called acetum colchici, and must now repeat some of my statements. The College directs one ounce of the fresh roots to seventeen ounces of fluid—sixteen of diluted acetic acid and one of proof spirit. For the vinum colchici (so called) the proportion of the fresh roots is twelve ounces to twelve ounces of fluid—four of proof spirit and eight of water. Besides this extraordinary difference of strength, arising from the different quantities of material in the two preparations, we may consider that the acetic acid exerts a modifying power over the active principles of the colchicum, as it does over opium and squills, rendering its action on the animal economy milder.

“It has been my favourite practice to employ the acetum colchici in preference to any other preparation, joining with it magnesia, or the carbonate, and, usually, sulphate of magnesia, as I fully set forth in my Treatise; so that, in this mode of administration, I not only prescribe a very mild preparation of the medicine, but, by means of the aperient ingredients just mentioned, I prevent its stay in the stomach, and thereby save the coats of that organ from inconvenience.”

Want of space obliges us to stop here, but we shall conclude our notice next week. In the mean time, we are bound to state, that those who do not possess the author's Treatise on Gout, would act wisely in procuring this epitome of it. It contains all the author's opinions and conclusions on the nature and treatment of gout, and these have been long esteemed by the profession.

It is a cheap, concise, and useful work, both to the practitioner of medicine and the public.

The London Medical

AND

Surgical Journal.

Saturday, May 30th, 1835.

REFORM IN THE COLLEGE OF PHYSICIANS.

SOME time since, when a contemporary journal announced that the College of Physicians was about to place all its members on an equal footing for the future, and to admit all the present licentiates of a certain standing to the fellowship, we expressed a fear that the news was too good to be true.

We suspect the event will prove that our apprehensions were but too well founded, and that our contemporary was either very coolly attempting to gull the licentiates, or was himself misled by an *ignis fatuus*, generated from the fervour of his own free and enthusiastic spirit.

We understand that proposals were brought forward, at a late meeting of the College, for admitting a certain number of licentiates to the fellowship. The most liberal party were inclined immediately to admit fifty; those who could not conscientiously go so far were for letting in only twenty; while those whose moral feeling was of the first water, would not hear of more than ten.

Now, let not the fellows flatter themselves that any of these plans will answer. If there be any *selection*, no matter whether the number of the chosen be large or small, the licentiates will, if they have a particle of spirit, indignantly reject the proffered favour, since it will imply, not that the fellows are, as they ought to be, convinced of their own folly and presumption in supposing themselves superior to the rest of the profession, but that they graciously condescend, out of mere indulgence, to admit a few of the inferior order into their own august fraternity.

We tell them this will not do; if they mean to retrieve their reputation, they must cast off, at once and for ever, the ponderous puppyism, the dull and clumsy affectation, by which they now endeavour to support their baseless pretensions, and be content to take their place with their brother physicians, grateful if the latter are willing to receive them into their ranks, after they have so long acted in a spirit of self-sufficient and bigoted eclecticism.

There is only one kind of reform in the College that the profession will or ought to accept—that of placing the graduates of all respectable universities, British or foreign, on precisely the same footing. In short, the College must return to what it was in the days of its illustrious founder, and the memory of Linacre be no more insulted by the vulgar illiberality of those who profess to venerate his name, but who deviate in every particular from his precepts and example.

The present state of the College cannot long endure, for, setting aside the impending parliamentary proceedings, and the influence of public opinion, which is now beginning to bear powerfully on medical politics, the initiated and we among the number, are well aware that all is not going quite smoothly even within the walls of the College itself. The fact is, that liberal principles have become so extensively disseminated among the junior fellows, that the advocates for things as they are, have enough to do to keep them at bay, and the pressure from without is scarcely more inconvenient than the fermentation within.

Let Sir Harry take heed; he is really a clever fellow, and quite a magician in his way, but like others of that craft, he may chance some day to be torn in pieces by the once obedient ministers of his will.

NEW REGULATIONS OF THE APOTHECARIES' COMPANY.

T. H. RAMADGE D. GENERAL PRACTITIONERS.

SIR—The company of apothecaries seem to have no idea there is a great difference between alteration and improvement. In their zeal to prove themselves progressing with the march of the times, they have issued forth their new regulations—which shew how purely ignorant they must be of the real state of matters. An experienced architect, a man who knew his business, would surely never add a new story to a house whose foundation was crumbling to decay—and yet these men, professing to understand their business, have added to their falling structure. For what purpose? Is it that their fall may be a more imposing one? or, is it offered as an insult to the profession, which has tolerated too long the insolence of these “Jacks in office,” the very Dogberrys of medical justice?

No, Sir, the new regulations are not calculated for the times. The framers of them ought to know this: their cupidity, their impertinence, and their absurdities have been thundered into their ears by this and other journals for years past. They were told they must begin the work of reformation at the beginning; that the odious apprentice law must be repealed; that the certificate system, the parent of numberless evils, must be dispensed with; that talent must be properly appreciated; in short, that they must abolish the system as it now exists—a system the most injurious and tyrannical that ever was formed or followed.

A short time since, in your journal, I exposed the absurdities of the law regulating apprenticeship—its utter uselessness—the waste of time to a medical student in dispensing medicines for five years, and the necessarily great expense attending it. Why could not these sapient law-givers make the time of apprenticeship shorter? Do they mean to add falsehood to their other good qualities, and tell us that five years is necessary to attain a knowledge of the compounding of medicines; and that three years is sufficient for anatomy, physiology, materia medica, chemistry, and the other collateral branches of medical science? They

do tell us this by their very regulations. *Proh pudor!* ye law-givers—ye upholders of the respectability, the honour of the profession! *proh pudor!* ye have written yourselves down as knaves or fools—knaves, if you make this statement with intent to deceive—fools, if you know not its utter absurdity and baseness. But ye have more knavery than foolery in your composition, if your acts can be dignified by the title of knaveries; but I fear they are of too low a character in the scale of intellect to be so styled. Ye are too bungling for knaves, and yet too cunning for fools. Yours is the low cunning of taking care of the main chance, without the address of hiding the flimsy trickeries by which you procure your victims' money. You have the bravado without the courage of the highwayman; the meanness without the address of the pick-pocket. This is severe, but the case requires it. Why will you persist in making a *trade* of the profession? Why will you, who have the direction of these things, allow an impertinent fellow of the College of Physicians, to have the opportunity of calling surgeon-apothecaries the *trade*?*

C.

DUPUYTREN'S CLINIC.

CATARACT.

M. DUPUYTREN having determined on making comparative trials of two modes of operating for cataract, proceeded in the first case, which occurred by depression. An imprudence of the patient brought on intense ophthalmia, which was effectually combated by leeches, and ultimately the transparency was complete, and the sight re-established. The second case was operated on by extraction. This patient was in a less favourable state than the former; the eyes being much sunk in the orbits, and affected with chronic ophthalmia, characterized by lachrymation and slight redness of the conjunctiva. This affection was attacked by venesection, and the application of a blister to the nape of the neck; the blister being open at the time of the operation. The patient was placed on his back in bed—for in such cases Dupuytren always operates in the ward—in order to avoid the consequences which might flow from the patient's being shaken on his return from the theatre, if carried thither. A simple change of po-

* A fact! see last week's “Lancet,”—a letter from F. H. Ramadge.

sition in bed, after the operation, is sometimes sufficient to cause mischief. The upper eyelid having been seized and fixed, not without difficulty, by an assistant, the operator depressing the lower lid, approached the point of Richter's knife to the cornea, a little above the middle line. The puncture having been made, the instrument was carried on, a little obliquely from above downward, and so as to divide by sawing, and not by pressing. The aqueous humour escaped, but not a drop of the vitreous; and a slight pressure on the upper part of the globe was sufficient to expel the crystalline lens. The eye appeared perfectly clear, and the patient saw distinctly. After the operation, M. Dupuytren made the following general and practical observations:—

Previously to operating we ought to pay the greatest attention to the general state of the patient, and examine most carefully the nature of any concomitant affections. These affections, which frequently contra-indicate the operation, or at least demand its postponement, are rheumatism, of shorter or longer duration, pulmonary catarrh, and disease of the stomach or intestinal canal; constipation, hæmorrhoids, diseases of the skin, and many others, such as various cerebral affections, also contra-indicate the operation, or ought to induce us to delay it, because they may, more less directly, give rise to accidents with respect to the eye, already irritated by the operation. If rheumatism exist, for instance, the operation may determine its metastasis; the eye becomes painful, and a serious inflammation is frequently the result. Whether you explain this by metastasis, or by irritation, is of little consequence. It is never prudent to operate in such cases; for experience has demonstrated the ill results which may follow. The rheumatism ought first to be attended to; and if we decide on operating while slight, indistinct pains still exist, it will be prudent to apply a blister to some part at a distance from the head. If bronchitis be present, beside the determination of blood to the head from the cough, we run the risk (if we have operated by depression) of seeing the lens remount, in consequence of the shocks which the head sustains, in the act of coughing. If there be disease of the stomach, not only shall we have to fear the same mechanical accidents which result from a cough, and which may here be produced by vomiting, but also the various complications which may flow from the sympathy between the stomach and the eyes—for there are some affections of the latter which are altogether dependent on disease of the former. Further, if we operate while the stomach is disordered, however slightly, we must always observe a very low diet for a long period; and the difficulty is well known with which children and old persons submit to this. Nor, indeed, in the case of the latter, is it without danger. This diet pro-

duces, among certain of these old patients, a sour odour, which may be perceived as soon as the curtains are opened: it causes disgust, and brings the mouth into a bad state. The tongue becomes large, pale, and foul; and this condition is sometimes not removed without a great deal of difficulty.

Diarrhœa, when it exists, obliges the patient to rise frequently; and this may cause displacement of the lens. Constipation may give rise (from the straining) to the same inconveniences as a cough; and if produced by irritation, may have sympathetic effects. The existence of the hæmorrhoidal flux is a contra-indication; and although we may operate for the cataract when the flow of blood has ceased, we must then be on our guard against congestion of blood about the head, and its slightest symptoms must be met by the application of leeches to the anus. When the patient is afflicted with a skin-disease, the operation may cause the irritation to change its place, which will not fail to give rise to some affection of the eye, difficult to cure.

Having thus considered the various complications of cataract (and we are far from having passed them *all* in review), it remains for us to choose the mode of operating: and here we cannot too much insist on the irrationality of employing the same method in all cases. In surgery, as in medicine, the same methods of treatment are not always to be employed for arriving at the same end. Thus in cataract, the age of the subject, and various circumstances relative to the form and volume of the organ of vision and its appendages, will oblige the practitioner to have recourse sometimes to depression and sometimes to extraction. With respect to age, looking at the degree of energy in the absorbent system at the two periods, we should say it was better, in general, to operate on children by depression, and on the aged by extraction. In the case of the former, the functions of life are in all their energy; the processes of composition and decomposition are executed with astonishing rapidity; and the absorption of the lens takes place almost at the instant that, deprived of its natural connexions, it loses its conditions of life. Add to this, that at that tender age the crystalline is never so hard as in the more advanced periods of life, and that, consequently, it offers less resistance to the absorbing powers. In old subjects, on the contrary, nutrition and absorption are less active. The latter, especially, appears to have lost its energy; exhalation predominates, and, besides, the lens is frequently of a remarkable hardness, and, on that account, less amenable to absorption. In patients who had fallen victims to diseases unconnected with the cataract, we have found the crystalline lens perfectly untouched, although displaced for more than two years. Thus, looking only at the different degrees of

energy in the absorbing process, we conclude (as we said before) that it would be better to operate by depression on the young, and on the old by extraction. But there are other considerations which are strongly in favour of depression in both cases. Children are rarely sufficiently docile; and not knowing how to distinguish what is advantageous from what is hurtful, will not keep their hands from their eyes, or restrain themselves from all motion during the operation. Hence arises much difficulty if extraction be attempted; and even the evacuation of the crystalline humour may be the result. On the other hand, in patients far advanced in life, the eye is often deeply sunk in the orbit. The borders of that osseous cavity become more and more prominent, according as the cellular tissue placed behind the globe is absorbed; and in such cases extraction is pre-eminently difficult. Once more—we meet at every age with individuals in whom, in consequence of irregularity in the movements of the eye, or vicious conformation of its appendages, extraction becomes difficult in the extreme; and, without insisting further on the case of those who have the eye continually agitated by rapid, and, as it were, convulsive movements, we have observed, that when a patient has been deprived of sight for any long period, with the habit of *seeing*, he appears also to have lost the habit of *looking*. The movements of the eye no longer obey his will; and this circumstance greatly detracts from the success of the operation.

After these general and comparative details on the choice of the two methods, the Professor described the manner of operating, both by extraction and by depression. Two instruments, according to him, are sufficient; in the first case Richter's knife, and in the second Scarpa's needle, modified by M. Dupuytren. Richter's knife appears to him preferable to that of Lafaye, because it acts principally by sawing, and not by pressing, like the other. The methods in question are too well known to render it necessary for us to dwell upon them. We would only direct the attention of our readers to one point, in the operation by depression, which M. Dupuytren has cleared up with great ability. The illustrious Scarpa was of opinion that every cataract should be broken up. How much the Italian surgeon was in error will be perceived, if we remember, with the French surgeon, that for the lens to offer a sufficient resistance to the needle, its mass ought to be much greater. On the contrary, it is fixed in its place by connections which are fragile in the extreme. The parts which are to sustain the impulse of the needle offer much less resistance than the lens itself: slender capillary vessels, a cellular web the finest in the body—a membrane of extraordinary tenuity—is all that confines the crystalline lens, and it bears on the vitreous humour. If we add to this the

firmness of the lens in some instances, so that it is difficult to crush it between the fingers after extraction, we shall be astonished as well as M. Dupuytren, that Scarpa could have thought of breaking it up in all cases. Nevertheless there are some cataracts which ought to be broken up, and which it is even impossible to depress; such as the milky cataracts, and those in which the force of cohesion is not capable of resisting the least motion of the instrument.

After the operation, we ought to be on our guard against a tendency of blood to the head. Should this occur, we ought, in young subjects, to have recourse to the most energetic antiphlogistics. In patients of a more advanced age, and not of a sanguineous temperament, these means ought to be employed with moderation.

A single white bandage, and over that a green or black shade, are sufficient for covering the eyes. It is useless, ridiculous, and even hurtful, to load the eyes with lint by way of dressing. The practice gives rise to pressure, which favours ophthalmia, or even the expulsion of the vitreous humour, if extraction have been performed. M. Dupuytren has not, in our opinion, sufficiently insisted on the inconveniences of all those pretty bandages with which patients are dressed, and which by producing a tight construction of the head, cannot but give rise to congestion. This produces pernicious effects, which we often vainly attempt to cure, and which more frequently still, freely run their course.

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Accidental Occlusion of the Vagina, forming an obstacle to Delivery. By C. Hoillemin, D.M.P. of Aux Cayes, Hayti.

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MADAME — de —, when twenty-five years of age, had an exceedingly difficult labour, lasting three days; during which she had no other assistance than that of an inexperienced midwife. The external parts of generation, as well as the vagina, were attacked with violent inflammation, which was followed by an almost complete closure of the vagina, only a small opening remaining, scarcely sufficient to allow of the passage of a goose quill. She long suffered from incontinence of urine, and much difficulty in walking.

About June, 1830, Mad. —, then twenty-seven years of age, first consulted me. She was at that time suffering with nausea, loss of appetite, progressive increase of the abdomen, swelling of the breasts, &c. I immediately recognised all the symptoms of

pregnancy at the third or fourth month, and informed Mad. — of it, who replied that it was impossible for her to be pregnant, since she could not cohabit with her husband, because her parts were closed, “*ses parties sont fermée*,” (this was her expression). The husband, who was present, confirmed all that his wife had said. Nevertheless, I assured her that she was undoubtedly pregnant, and I did my best to tranquillize her uneasiness, for she incessantly repeated that it was impossible for her to give birth to her infant.

The 30th of December of the same year, Mad. — sent for me at midnight. Labour pains had just come on. On examination I found that the vagina was closed by a firm membrane, extending across it, and which was thickest laterally. Near the meatus urinarius, a kind of fleshy band originated, which was lost in the partition. In the centre of this last there was a round opening, scarcely large enough to admit a quill, and the margin of which was thick.

I proposed to Mad. — to divide the membrane closing the vagina, to which she consented. After the uterine contractions had continued for six hours, I took advantage of the moment when the membrane was pressed forward and downwards by the membranes and the head of the child, to divide the margin of the opening, and then inserting the index finger of my left hand between the head of the infant and the partition, with my right hand I passed the blade of a straight probe-pointed bistoury upon the finger which served as a conductor, and cut the membrane from within outwards, on the left side, to the extent of an inch, and then waited the effect of the renewal of the uterine contractions. After an hour, during which these were strong and frequent, the opening not enlarging, and the membranous partition being constantly pressed down, I made another incision from within outwards on the right side, so that these two incisions formed a triangular flap, the base of which was towards the sacrum. The umbilical cord immediately protruded; the waters, which were discharged, were black, and exhaled a strong and disagreeable odour. Mad. — became covered with a cold sweat; had repeated faintings; her pulse was almost impercep-

tible, and the uterine contractions were infrequent. Suspecting that the child was dead, from there being no pulsation in the umbilical cord, and having great fears for the mother, I hastened to terminate the labour by delivering with the forceps. The child appeared lifeless; its surface was livid, indicating cerebral congestion. After dividing the cord, I allowed three or four ounces of blood to flow; I employed dry frictions over the cardiac region, &c. and was not a little surprised to see the infant revive, as well as the mother, both of whom are at present in the enjoyment of perfect health.

Precautions were taken to preserve separate the parts which had been divided, and to prevent their reunion; the opening of the vagina was thus re-established in its natural state. The triangular flap resulting from the two incisions gradually diminished, and at the end of two years no trace of it remained, and Mad. — could cohabit with her husband without experiencing any inconvenience.

This case appears to me to be interesting in a double point of view, both as respects the delivery and conception. I submit it to the profession, believing it to be not unworthy of their observation. *Aux Cayes, (Hayti), October 29th, 1834.—American Journal of the Medical Sciences.*

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Case of Malignant Cholera, in which Delivery at Term took place, during its advanced or collapsed Stage, and the Patient recovered. By Francis West, M.D. September 28th, 1824.

HANNAH CARPENTER, a mulatto female, aged 20, of sound constitution and previous good health, came under my medical care as a patient of the Philadelphia Dispensary. She was living in a cellar in Water Street, between Spruce and Pine streets, occupied by a large black family, and had been attacked some hours before I saw her with the symptoms of malignant cholera, which was at the time prevailing with frightful severity in her immediate neighbourhood.

I first visited her about noon of this day, (Sept. 28th); I found her as follows: She had been vomiting and purging since early in the morning, and was then discharging up-

wards and downwards very large quantities of a white, flocculent, rice-water fluid; she had most violent cramps in her arms and legs; her skin, especially of the extremities, was cold, damp, inelastic, and corrugated; her tongue and breath were perfectly cold; and her eyes, I remarked, as unusually sunken in their orbits; her voice was strikingly characteristic, being husky, stridulous, and very low; her pulse was very weak, thready, and undulatory, and she was tormented by insatiable thirst and great restlessness. I was told, too, that she was daily expecting to be confined, and with her first child. A large sinapism was at once laid over her abdomen, and blisters were ordered for her legs, and a powder to be given her every hour composed as follows:—*Rx.* Calomel, gr. j; Camphor, gra. xv; Opium, gr. ss. M. Dry warmth was applied to her extremities, and Cayenne pepper infusion was directed as drink. Dr. Bond, who had occasion to be in the neighbourhood, kindly saw the patient with me at four o'clock, P.M. The sinapism had caused excessive pain, and she had retained the two powders which had been given to her. It was agreed to continue the treatment instituted. In the evening she was better, though the diarrhoea still continued, and her skin was excessively cold, and inactive, with a very feeble pulse, &c. The cramps still continued. During the next day, notwithstanding her condition was improved, she still remained very ill, and her situation very critical. The blisters had slightly drawn. About six o'clock in the afternoon I was sent for in great haste, and when I arrived the patient was on her knees on the floor, in strong labour, and with the child half protruded through the external parts. I had her placed upon the bed as soon as possible, and quickly afterwards she was delivered of a still-born male child of full size, which apparently had been dead for some days; the placenta was long in coming away, but there was very little hæmorrhage either before or after its escape. The patient was much exhausted.

On Tuesday morning I found her better in all respects, and there was very little discharge. I directed the blistered surface to be kept sore, and allowed her barley water for drink, which was generally retained. On Wednesday she felt so much better as to wish

to sit up in bed. On Thursday, she continued to improve, and the next day she was sufficiently well to bear removal from the cellar, which the board of health had ordered to be vacated, and cleared as soon as she could possibly leave it. I did not see the patient for some time afterwards, when she called to say that she 'was perfectly well.—*American Journal of the Medical Sciences.*

Philadelphia, Dec. 10, 1834.

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Case of Wound of the Genitals. By James B. M'Junkin, of Lexington, Georgia.

ON the night of the 14th July, 1832, J. A. æt. 39 years, was attacked by a ruffian, who, aided by two negroes, seized him while asleep in his own bed, held him fast, and committed upon him the inhuman outrage which I am about to describe.

Grasping the scrotum with his left hand, he passed his knife through it posteriorly, cutting it close to the body, on the right side. This incision, which was nearly transverse, divided the urethra and the greater part of the crura of the corpora cavernosa penis, leaving the anterior face of the scrotum attached to the under side of the penis unhurt. The point of the instrument was directed inward and upward in the right groin, and brought out a little lower under the left. The spermatic cord of the right side was severed at the same time just above the epididymis. A second incision was then made, two inches and a half in length anteriorly, meeting the former at the right of the root of the penis, and carried in a direction toward the superior spinous process of the right ilium; this was not deep enough to wound the left spermatic cord, but merely penetrated the skin. A small angular piece of integument was thus left undivided by the knife, on the left side of the penis. This was lacerated by dragging forward the scrotum; the skin of the penis was inverted over the glans, and the member denuded, and the right testis cut and torn off. The left testicle, now completely exposed, was retracted into the groin.

In this situation J. A. was found by Dr. Pond and myself, who saw him three or four hours after the receipt of the injury. Dr. Hull was also subsequently associated with

us in the treatment of the case. The patient had lost much blood, but the hæmorrhage had now ceased. He suffered much pain, which was, however, entirely relieved on our dividing the inverted fold of skin which lay over the spermatic cord and left testis, and in contact with the latter. The wound was so extensive that but a small portion could be covered by integument. A narrow strip of lint, spread with simple cerate, was rolled around the denuded penis, and the parts covered and protected with finely carded cotton. The daily renewal of these dressings was followed by great pain of the testicle, which would continue some hours. The escape of urine at the wound in the urethra also occasioned great irritation and suffering, the patient refusing obstinately to submit to the introduction of a catheter or bougie, which was urged upon him. About the fifth day the urine found its way through its natural channel, the edges of the wound having coalesced; but this union gave way again on the occurrence of nocturnal involuntary erections. A few days afterwards these ceased to happen, and permanent re-union took place; but, owing to some irregularity in the manner of healing, there still remains a degree of narrowness at that part of the urethra, and some obstruction to the free passage of urine. On the third day there supervened much febrile excitement, with stupor and soreness of the abdomen; but these threatening symptoms disappeared under the employment of the lancet and other ordinary antiphlogistic remedies, and the patient was discharged in a about ten weeks.

In J. A.'s present condition, the parts exhibit the following aspect. A pretty strong, smooth, elastic envelope now encloses the testis, supplying the place of the scrotum. This sac is destitute of hair, and is not at all rugous. The testicle having suppurated at one small spot, the sac is united to it by the cicatrix which formed on its healing, and in consequence of this adhesion is not permitted to descend, but remains near the groin; a situation much exposed to accident, and where it is often hurt. A tense, smooth surface covers the membrum virile, resembling a cicatrix from a superficial burn. The mucous fold of the prepuce having been detached

from its cutaneous prolongation, is coiled behind the glans, giving the appearance of a double corona or ring. Adhesions and contraction of the cellular tissue, especially at the posterior extremity of the penis, greatly prevent the erection and elongation of the organ. This is particularly obvious at the wound of the urethra and under the ramus of the pubis, where the penis appears as if tied down with a cord, occasioning irregular incurvation posterior to the place of the incision. A condition resembling chordee also existed for some time after the parts were healed, causing much pain and disappointing his attempts at copulation, but by dividing the frenum preputi, this impediment was much diminished, though not entirely removed.

He now enjoys a pretty good state of health, being able to attend to his usual avocations, but is easily liable to a sense of fatigue in the lumbar region. The propensity for venereal gratification is perhaps as strong as ever, but the actual enjoyment is much impeded by the state of the organs above described.—*American Journal of the Medical Sciences.*

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Oil extracted from the Spirit of Wine of Potatoes. By M. J. Dumas.

PREVIOUS to rectification, spirit of wine whether it be obtained from malt or potatoes, possesses a peculiar taste and smell which is removed by distillation frequently repeated. It has been long known that these properties depend on a peculiar oil, and its presence was first detected by Scheele. Fourcroy and Vauquelin proved that the oil was not a product of fermentation, but that it existed in grain, and could be separated by treating it with water, and taking up the oil from the liquid by alcohol. M. Payen has shewn that the seat of this oil is in the tegumentary part of the fecula of potatoes. Those who have examined the oil proceeding from the spirit of barley, describe it as capable of crystallization, volatilizing with difficulty, undergoing alterations by distillation, and staining paper permanently. Pelletan found on the contrary the oil from the spirit of potatoes to be a true essential oil. Dumas examined a specimen from the manufactory of Dabrunfaut; it possessed a reddish yellow colour, and a very disagreeable smell.

When one breathes the air charged with it, nausea and head-ache are produced. Carbonate of potash diminishes the odour considerably, and when distilled with it renders it analogous to that of nitric ether. In order to free it entirely from alcohol, it is necessary to distil cautiously, and obtain a residue of pure oil boiling at 180 deg. (266 deg. F.) or 182 deg. (269 deg.) the alcohol passing over first. Dumas suggests, that although bearing some affinity to alcohol and ether, it may belong to the family of camphors. The density of its vapour is 3.147, or calculating from the composition 3.072. It consists of:

Carbon.....68.6
Hydrogen.....13.6
Oxygen.....17.8
(Thomson's Records of General Science).

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Intussusception with Stercoraceous Vomiting, successfully treated by Inflation. By J. Wood, M.D.

Mr. G. aged thirty-five, a type-founder, of nervous temperament, was suddenly seized on the night of September 17th, with violent pains in the umbilical region: he has before suffered two slight attacks of rachialgia. A medical gentleman in the neighbourhood saw him, and prescribed purgatives and hot fomentations. My attendance was requested the next night. He had obtained no relief from the remedies administered during the day; stomach had rejected them. No dejection for three days; frequent retching; little intermission from pain; pulse small and regular. Superficial examination of the abdomen detected no peculiarity. An acquaintance with his previous attacks led to the presumption that the present was painters' colic: he was, therefore, directed to take a pill containing two grains of opium, and one drop of croton oil every two hours till relieved; and to have an enema every four hours, and bags of hot sand to the abdomen.

Sept. 19th. Has taken all the pills; less pain through the night, but since day-break paroxysms have returned with greater force and frequency, accompanied by violent tormina and tenesmus; dry retching, especially after taking drink; hiccup; slight but general tenderness of abdomen; pulse irregular, irritated; no faecal evacuation, but discharged

in the course of the day a little bloody mucus, and vomited, towards night, a large quantity of green bile mixed with feculent matter. After a careful examination, the precise point of obstruction was ascertained. At first, only an unusual fullness and firmness in right iliac region could be discovered: but the hand lying upon the spot, a paroxysm of pain occurred, and an elongated tumour was felt to rise with an erectile motion; immediately there followed a gurgling rumbling noise, and a rush of fluid downwards against the point of obstruction. After two or three surges against the tumour, the fluid receded towards the stomach; but again returned with renewed violence, until the spasm subsiding, it passed upwards, the bowels taking on an inverted action. The treatment adopted was copious bleeding, the administration of purgatives, as calomel, infusion of senna, castor oil, enemata of tobacco infusion, hot anodyne fomentations, and at night large doses of opium.

20th. Aggravation of all the symptoms. In the afternoon Dr. Morril saw him, and after a careful examination of the case and an acquaintance with the treatment pursued, he agreed in opinion that there were no grounds for hope. As a last resource, however, he proposed inflation of the bowels with atmospheric air. Placing the patient on his right side, the pipe of a pair of bellows was introduced into the rectum, and inflation cautiously begun. This succeeded but partially, owing to the imperfection of the instrument; yet to our surprise, he proclaimed himself much easier, and was irresistibly driven to the commode, where he passed a large quantity of air and a gill of very foetid bloody water. A more perfect pair of bellows having been obtained, the tube was again inserted, and inflation employed till the abdomen became tense. He had no recurrence of violent pain after the first inflation. Directions were given him to remain quiet in bed, and resist the disposition to evacuate the bowels; to take one drop of croton oil every two hours, and at the end of four hours an enema of mucilaginous fluid. He was visited six hours afterwards; had had no return of pain since inflation: within last hour two copious dejections.

21st. Had seven dejections since last visit; quiet sleep for three hours; somewhat fever-

ish, thirsty; countenance anxious; pulse 125, small; tongue red, dry in centre. Full vesication from blister applied yesterday. Pretty severe enteritis followed, which yielded to the usual remedies in the course of fourteen days.

The result of this case was extremely gratifying. With regard to the treatment finally employed, we had no very sanguine anticipations of success; yet it must be admitted, that there is more philosophy in it than in many other plans adopted to lessen the ills of life. Of the numerous enemata administered in the forty-eight hours preceding the inflation, but a small quantity was retained, and that but momentarily. The use of them was persisted in with the hope of effecting mechanically the dilatation of the gut. In similar cases, the enemata cannot be thrown up to any amount: what is injected immediately returns. The effect is totally different when air is used. Its levity, its freedom from all irritating qualities, its elasticity and expansibility, give it a decided preference over the enemata. The nature of the difficulty also warrants the view of its utility. The tendency of the peristaltic motion and of the ingesta, is from above, downwards; most cases of intussusception, therefore, are *progressive*, few *retrograde*. If then, we can dilate the stricture, the invaginated portion will escape from below upwards, and thus will be restored to its original situation. If the above explanation be correct, what remedy can compete with inflation? It certainly merits a trial, and is earnestly recommended to the consideration of the profession. —*Boston Medical and Surgical Journal and Med. Mag.*

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Fresh Water formation in Greece with Lignites.

IN 1830, a report was very generally spread of the discovery of coal in Greece. M. Theodore Virlet, who was in that country soon after the coal was said to have been observed, proceeded to the spot for the purpose of examining into the truth of the report. He visited the *Sporades Septentrionales* or Devil's Archipelago, situated at the mouth of the Gulphs of Volo and Salonica, near the coasts of Thessaly and Macedonia, where it was

said coal existed. He found the islands of Skiathos, Skantzoura, and Diodelphia to consist of primitive rocks, those of Xero, Xera, Panagia, Jacoura, Piperi, &c. to belong to a calcareous formation. In the island of Skopelos the latter rests on clay slate, and in some respects agrees with the transition limestone, but the existence of a number of fossils and especially *Hippurites semicostellata*, proves its distinct nature. *Tornatella priaca*, and *Turritella antiqua* Desh are likewise met with.

Iliodroma is a long, narrow, mountainous island, which consists of three formations: 1. Mica-slate, clay-slate and lime-stone. 2. Blue and grey limestone. 3. A fresh water tertiary formation containing lignites, which occupies half of the surface of the island, and was mistaken for coal. The lower portion is situated 200 or 300 metres above the sea, and is constituted of blue or green marls with a great deposit of fresh water and land shells belonging chiefly to the genera *Planorbis*, *Paludina*, *Helix*. Over these marls lie thin strata of marly limestone without fossils, but containing an irregular bed about two feet (Paris) thick of lignite, in general mixed with clay and shells. Above the lignite grey marls occur, filled with the debris of fossil vegetables. The whole of the formation is about 190 English feet in thickness. Among the fossils obtained from this formation, the most numerous belonged to what M. Adolphe Brongniart, who examined it, has termed *Taxodium Europæum*. It has also been found at Comothau in Bohemia, and at Cœningen near the lake of Constance. It belongs to the order Corniferae, and is characterised by long slender branches, subglobose cones, with leaves spiral or sometimes arranged in three rows.

Virlet considers this formation more ancient than that of Cœningen, and contemporaneous with the dislocation of strata which produced the Dardanelles, and with the corresponding formation in Switzerland, and the marine deposit of *Gompholites* in the Morea.

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Mr. Liston will lecture on surgery, the ensuing winter session, at Mr. Lanc's School, adjoining St. George's Hospital.

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VOL. VII.

LECTURES
ON THE
INSTITUTIONS OF MEDICINE,

DELIVERED BY JOHN FLETCHER, M.D., F.R.C.S.E., AT THE ARGYLE SQUARE SCHOOL OF
MEDICINE, EDINBURGH; SESSION 1834-35.

LECTURE XX.

Stimuli to Irritability.

IRRITABILITY is only one of the conditions necessary to life—it is only, as it were, the susceptibility of living, or as the French call it, *l'aptitude à vivre*—and other conditions are still requisite in order to give rise to those phenomena in which life, consisting as it does in the sum of the essential functions performed by organized beings, consists. We have done with the main or lowest wheel of the organized machine, as represented in the diagram already published, *considered at rest*: we have now to pass on to the horizontal train of cogs, by the hitching of which with the cogs of this wheel, the latter is set in motion—in other words to those stimuli from the action of which on irritability or vitality, irritation or life results.

These stimuli may be spoken of as either direct and primary, or indirect and secondary; the former acting *ab initio* on the irritability of the organs to which they are applied; the latter implying always a previous irritation of one organ, no matter by what means excited, and consisting in a translation of this irritation, so as to act on the irritability of organs at a distance. Thus, a pinch of snuff, applied to the schneiderian membrane, excites *ab initio* an irritation of that organ, indicated by the changes effected in its secretions; and this irritation may either go no further, or may be translated, by sympathy, to the abdominal muscles, and excite there a secondary irritation, indicated by the sneezing which so often follows: snuff, therefore, is an example of a direct and primary stimulus to irritability, and sympathy an example of an indirect and secondary one. It is of importance to remark, however, the then stimuli are not, any more than irritability on which they act, substantial, although, like irritability, they are necessarily attached to something that is so; and such substances, accordingly, in the case of the direct and primary stimuli, are, for the purpose of avoiding circumlocution, always put for the stimulus of which they are at once the source and the vehicle. It is obvious that if life be a non-entity, neither of its conditions—irritability, nor any stimulus by which irritability is excited—can be entities. When we say, therefore, that snuff, or any other substance, is a stimulus to irritability, we mean only that the substance in question possesses some power which acts in this capacity; and we specify the substance only as a summary way of indicating the power which it exercises. We recognize these powers as we recognize the property; on which they act, only by their effects—we know nothing of them abstractedly. They are, in every case, the result of the peculiar aggregation of matter in which they reside, in the same way as irritability is the result of organism; but they are certainly no more identical with the substance of which they are characteristic, than irritability is identical with the organized tissues of which it is the attribute.

Of the direct or primary stimuli to irritability, the chief are certain universally-diffused agents, to which organized beings, in common with inorganic matter, are more or less constantly exposed, such as *caloric*, *light*, and *electricity*; others, of which they continually appropriate a portion to themselves, such as the medium by which they are directly surrounded, whether *air* or *water*, and the solid and liquid substances which they use as *aliment*; and others, lastly, which constitute at all times a substantial part of themselves, such as their various *fluids*, whether crude, mature, or secreted. Of the indirect or secondary

stimuli, the principal are *sympathy* and *passion*, or *instinct*—the two latter of which appear to be merely varieties of the former—and *volition*. In addition to these, which may be regarded as more or less constant and salutary stimuli to irritability, and which, when neither excessive nor defective, constitute what may be called the exciting causes of health (a); certain others occasionally come into operation, the action of which, as well as that of any of the preceding, when either in excess or deficiency, is prejudicial, and it is of these that the exciting causes of disease consist; but with these we have nothing to do at present.

One of the most universal of the natural stimuli to irritability is caloric; which, in a sensible or latent state, is present in every form of matter, and is continually exercising a powerful influence on the actions of all organized beings. It is hardly necessary to observe that heat and cold are merely relative terms. We call it heat—sensible caloric—when the quantity of this principle is such, in relation to the capacity of the substance containing it, as to raise its temperature above that of the surrounding medium, and consequently to give off caloric to this medium; and, on the contrary, we call it cold, when the quantity of caloric is such, in relation to the capacity of the substance, as to allow its temperature to fall below that of this medium, and consequently to abstract caloric therefrom; but in all forms of organized beings, as well as in every form of inorganic matter, more or less caloric is always present, and in all it is constantly operating as a stimulus to their irritability, and producing irritation; nor is this more certainly the case with respect to those organized beings the temperature of which is generally above, than with respect to those in which it is below that of the air or water in which they live. It appears, however, that every organized being requires a certain definite quantity of caloric in relation to its capacity, under the operation of which alone its functions proceed with energy—that, in some cases this is so considerable, as to raise its temperature above that of the medium which it inhabits, and in such cases its office is, as the result of some of its most indispensable functions, to extricate sensible caloric, or, as it is commonly expressed, to generate heat; in other cases it is such as to maintain its temperature upon a par with that of this medium, when the calorific and frigorific processes going on within it are precisely balanced; while in other cases, lastly, it is so small as to reduce its temperature below that of this medium, when its business is to absorb sensible caloric, or, in other words, to generate cold. Thus, to confine the question at present to animals, most of the invertebrate tribes, with the exception of insects, as well as most fishes and reptiles—hence called cold-blooded animals—require only a quantity of caloric, in relation to their capacity, sufficient to bring their temperature to about 60° Fahr., while most insects, birds, and mammals, require sufficient to raise it to between 80° and 110°; and if they derive either less or more than this quantity from without, they must themselves either compensate for the deficiency,

(a) At the time when it was customary to regard life as something inherent in the living body, and *per se* competent to bring about all vital phenomena, it was the practice to speak of every thing relating to the structure and actions of the body, under the name of *naturals*; of which seven were generally admitted—namely, its organs, its tissues, or associations, its fluids, its principles, its properties, its powers, and its functions; the first five of which have been already spoken of in the order in which they are above enumerated. The error of this schedule consisted in including also the powers and functions of the body, which were represented as likewise inherent in it, instead of the powers being regarded as more or less adventitious agents, from the co-operation of which with the characteristic property of the body (i. e. irritability), the functions revolted. This, however, would have been to deprive the everlasting vital principle of its self-sufficiency; and consequently, all those agents which the patrons of the vital principle doctrine could not avoid observing very materially influenced vital phenomena, and which should have been included under the head of the adventitious powers aforesaid, were regarded as quite

accidental, and marshalled accordingly into a distinct phalanx, under the name of *non-naturals*, of which it was customary to admit six—to wit, air, aliment, exercise, the secretions, the passions, and sleep. Upon what principle the most natural things in the world, as remarked by Sterne, should ever have been called non-natural, remains unexplained; but a remnant of this ancient absurdity is still perceptible in the advice sometimes even yet given to valetudinarians, to take care of their non-naturals. It was reserved for John Brown to abolish this non-natural and unfounded distinction, by demonstrating that life, and of course all the functions of the body, in the sum of which life consists, depended solely on the operation of some of these non-naturals, in conjunction with many other agents more or less allied to them, but which the founders of this distinction, in the plenitude of the perplexity in which their untenable hypothesis respecting life involved them, had inadvertently omitted. But it is idle entering into any investigation of the merits of a system, which is not less loose and arbitrary in its detail, than it is, in its general principle, opposed to every thing like reason and common sense.

or carry off the excess. It is not, however, in all forms of organized beings that this power of counteracting external temperature resides to any considerable degree, or at any rate it is not all which exercise it with impunity, and indeed in few or none but man is it such as to be capable of resisting every ordinary degree of external heat or cold; so that while man, the natural temperature of whose body is about 98° Fabr., is found the inhabitant of every clime, from the temperature of 55° to 125° , or can accommodate himself to any point within a range of about 180 degrees, almost every other form of organized being has its fixed habitat, or a comparatively limited scope within which alone it is competent to exercise its functions. Thus, some plants, as mosses and lichens, thrive best in regions where no other tribes of vegetables could exist; and the pine and fir flourished where the oak, the elm, the beech, and the chestnut would fail. A slight increase of external temperature, however, answers for these, but a more considerable increase is required for the apple and the pear, the plum and the cherry, and a temperature still more elevated for the cedar and the cypress, the fig, the olive, the orange, and the lemon; while the palm, the date, the cocoa, the coffee tree, the bread tree, the banana, and numerous others, come to perfection only in the torrid zone; nay, some kinds of water-plants thrive abundantly well in water at a temperature which would have been sufficient to boil them, had they been destitute of vitality (a). In these cases, then, we must conceive that the power of extricating sensible caloric, or compensating for the deficiency of it from without, has gone on progressively diminishing, while that of absorbing sensible caloric, or carrying off the excess from without has gone on progressively increasing; but no one of these plants seems competent to do, indifferently either the one or the other, according to circumstances. The various degree of external temperature required by plants are beautifully exemplified in mountainous districts, the low valleys of which are frequently adorned with the vegetable products of the torrid zone, and the more elevated districts with those of temperate climates, while towards the summit nothing is met with but the meagre natives of the polar regions; and the lines of demarcation are sometimes so remarkable, that on the volcano of Teneriffe no fewer than five distinct zones, marked by the vegetable products which characterize different climates, are distinguished. In like manner, with respect to animals, among fishes, the cod (*Gadus*, 27), among birds, the eider-duck (*Anas*, 36), the albatross (*Diomedea*, 36), and the Lapland owl (*Strix*, 40); and, among mammals, the whale (*Belena*, 42), the seal (*Phoca*, 43), the walrus (*Trichecus*, 43), the rein deer (*Cervus*, 45), the Polar bear (*Ursus*, 50), and the Esquimaux dog (*Canis*, 50), are met with exclusively in frigid regions; others, as most of those animals with which we are familiar, and, among beasts of prey, from which we are happily exempt, the wild boar (*Sus*, 44), the brown bear (*Ursus*, 50), the wolf (*Canis*, 50), and the lynx (*Felis*, 50), thrive best in temperate situations; while others, lastly, as, among molluscos animals, the pearl oyster (*Ostrea*, 7); among insects, the mosquito (*Culex*, 19), the white ant (*Termes*, 22), and numerous kinds of butterflies; among fishes, the electrical eel (*Gymnotus*, 26); among reptiles, all kinds of serpents and lizards, the crocodile, alligator, and gavia (*Crocodylus*, 35); among birds, the humming-bird (*Trochilus*, 38), the bird of paradise (*Paradisea*, 38), the parrot (*Psittacus*, 49), and the toucan (*Rhamphastos*, 49); and, among mammals, the elephant (*Elephantus*, 44), the hippopotamus (*Hippopotamus*, 44), the camel, and dromedary (*Camelus*, 45), the giraffe (*Camelopardalis*, 45), the hyena (*Canis*, 50), the lion, tiger, leopard, and panther (*Felis*, 50), and the various kinds of monkey (*Simia*, 51), are confined to torrid districts. Nay, some fishes live, and move, and have their being in water, the temperature of which is only a degree or two below the boiling point (b). And the same inference is to be drawn here as with respect to plants, that, as the inhabitants of frigid regions excel principally in the power of extricating sensible caloric, so those of the torrid zone, habitually exposed to intense heat in any form, are calculated rather for absorbing a portion of that by which they are surrounded. Temperate districts are accordingly too hot for the former—for the function of the lungs, a principal indirect office of which is to extricate sensible heat, being no longer in the usual requisition, is in a great measure suspended, and that to the great prejudice of the animal, by that of the liver—while they are too cold for the latter—the lungs being now more than usually and equally injudiciously exercised; and it is a remarkable fact that, as the rein deer, the Polar bear, and the Esquimaux dog, when brought to this country, commonly die of diseases of the liver, or other affections of hot regions; so the camel and dromedary, the lion, the tiger, and the monkey, under the same circumstances, generally perish of consumption, or other diseases peculiar to cold climates. Man almost alone, of all forms of organized beings, is competent to strike, with comparative impunity, such a balance in the functions of his several organs, under all ordinary degrees of external heat and cold, as to maintain the temperature requisite to the healthy excitement of his irritability; and the only effect which a higher or lower external temperature seems to have upon him is in the establishment, according to the greater or less

(a) Sonnerat, Foster, &c.

(b) Clarke, Sonnerat, Humboldt, Bonpland, &c.

exercise of this or that organ in effecting this balance of what are called national temperaments. Into a consideration of the means by which he is enabled to effect this balance, or the process of acclimation, as it is called—important and interesting as the subject is—it would be quite out of place to enter at present. Suffice it to say, in conclusion of this subject, that to every action, molecular or sensible, of every organized being, in which its life consists—in other words, to every instance of excitement of irritability—a certain quantity of caloric, in relation to the capacity of this being—that is to say, a certain temperature—is indispensable; and that if it meet with either less or more than this definite quantity from without, it must either increase or diminish it, as a result of certain processes going on within itself, although it is only within certain limits that such processes are in general exercised with impunity. This, then, is the relation, and the only relation in which caloric, or heat, stands to life—it is essential to life, but it neither is, nor can be identical with it, as was in former times so vaguely imagined (a).

A second, and perhaps equally universal stimulus to irritability is light, which, like caloric, pervades every form of matter in either a sensible or latent form, and continually exerts, perhaps, a more powerful influence on the actions of organized beings than is commonly believed. It is, perhaps, difficult to conceive that such beings when in what we call darkness are still under the stimulus of light; but we should keep in mind that light is not in itself luminous, any more than caloric is heating, and that it appears so only when its equilibrium is destroyed—that is to say, when a portion of what is contained is sent off from one body to others. Light and darkness are, in fact, like heat and cold, merely relative terms, and an organized being in darkness is no more withdrawn from the stimulus of light, than a being, the body of which is as cold or colder than the surrounding medium, is deprived of the stimulus of heat. Nevertheless, it is sensible light alone the stimulus of which is generally acknowledged; and even this is commonly regarded as very circumscribed in its operation, if not on the irritability of plants—which certainly appears to be very much under its influence—at any rate on that of animals, the only parts of which generally regarded as amenable to this agent being those of the eye. This, however, is in all probability a mistake; the parts of the eye alone appearing to be stimulated by sensible light only, because they alone are furnished with sensiferous nerves capable of taking cognizance of the irritation so produced, and of converting it into sensation, but all parts so exposed, being in fact equally the seat of such irritation. It is probable that every plant and animal thrives best when acted on by a certain definite quantity of light, as well as of caloric, in relation to its own capacity; but it does not appear that organized beings in general exercise any power like that manifested with respect to caloric, of so destroying the balance of the light within them and that of the surrounding medium, as to produce either a sensible extrication or a sensible absorption of it. Many plants, it is true, both cryptogamic and phanerogamic, have been represented as extricating light under some circumstances; and, among animals, some polypi, as the sea-feather (*Pennatula*, 2), some acalepha, as the sea blubber (*Medusa*, 4), and many insects, as the lantern fly (*Fulgora*, 18), the glow worm (*Lampyrus*, 24), and the fire fly (*Elater*, 24), certainly possess this power to a very considerable degree, while innumerable others display more or less of it. It is in general confined, however, to a particular part of the plant or animal which possesses it, and is certainly exercised for a purpose very different from that of exciting their irritability, as a stimulus to which alone light falls now to be considered. Light is, perhaps, as essential to life as caloric; but it is unnecessary to say that it neither is, nor can be identical with it, although this opinion has not wanted advocates (b).

(a) It is quite unnecessary to recapitulate all that has been said concerning the supposed *Πῦρ καθαρόν*, the elementary fire, the Promethean heat, the calidum innatum, &c., as synonymous with life. The error consisted only in mistaking a necessary condition of life for life itself.

(b) Light, the first of created things, and the creation of which is described in the most sublime passage of written language, is spoken of, in almost every page of the oldest book in the world, as emblematical of

all that is excellent, and of life among the rest; and we have recently seen that Galen represented the influence communicated by the nerves to the contiguous parts, as something, if not identical with, certainly very analogous to this principle. Among the few modern authors who have entertained themselves with propagating the notion of the identity of light and life is Lamarck, who represents the latter as a substance composed of a kind of mixture of light and electricity!

LECTURES
ON THE
PHYSICAL EDUCATION AND DIS-
EASES OF INFANTS,
FROM BIRTH TO PUBERTY.

BY DR. RYAN,

*Delivered at the Medical School, Westminster
Dispensary, Gerrard Street, Soho;
Session 1834-35.*

LECTURE XXXVIII.

*Variola on the Fœtus in Utero—Measles—Pem-
phigus—Elephantiasis.*

GENTLEMEN—I shall now conclude the essay of Dr. George Pearson, as the facts and observations which it contains clearly prove that small pox may be communicated by a pregnant woman to the infant in her womb. I shall shew, in the next lecture, that persons who are contaminated with syphilis without any sores on the genitals infect, the infant in different degrees, and in some instances that seven or eight infants have been born dead and decomposed, between the seventh and eighth months of pregnancy.

The remainder of Dr. Pearson's cases are as follow:—

Case 4.—In 1747, Dr. Mead, in his treatise *De Variolis*, relates the case of a lady, who, in the seventh month of her pregnancy had the small pox. On the eleventh day of this disease she was delivered, and her infant, when four days old, had a fever with eruptions, which Dr. Mead concluded was the small pox, although it died the evening of the first day of the eruption.

Case 5.—Dr. Mead, in the publication just mentioned, informs us (from memory), that a woman towards the close of her reckoning (who had long before had the small pox, but after attending during pregnancy a person in this disease) was brought to bed of a dead fœtus, covered with pustules.

Remark.—For reasons given in the remark on Dr. Mortimer's case, this also stands in need of confirmation; and we have a better right to arraign the accuracy of Dr. Mead's, because in the same page in which he states this case, he misunderstands, or misconstrues, a case of Mauriceau, with regard to a child going through the small pox in the womb, as remarked already by Sir George Baker.

Case 6.—In 1747, Sir William Watson (see *Philosophical Transactions*, vol. xlv, p. 239) published the case of a woman far advanced in pregnancy, who had laboured under the small pox a long time before, who during this pregnancy performed the duty of a nurse to her servant in the natural small pox, and in a month after this attendance was brought to bed of a child that had about forty scars upon its body like those from the small pox. This child (a girl) and her brother were after-

wards inoculated at the same time. The brother had inflammation of the parts inoculated, eruptive fever, and eruptions as in the most ordinary small pox; and the girl, born with pits on her skin, had inflammation and suppuration in the parts inoculated, in the same manner as her brother, and a general indisposition as in the undoubted cases of small pox, but no eruptions. Sir William concludes that this girl had gone through the small pox before her birth; and Camper and Van Swieten coincide with him in this conclusion.

Case 7.—The next case I have to mention is also furnished by the observation of Sir William Watson. A woman, on the ninth day of the natural small pox, was delivered of a child, which, on the eighth day after its birth, had various eruptions: therefore the author concluded that it had been infected by the mother while in the womb.

Remarks.—This seems to be the most reasonable conclusion, because subsequent experience has shown, that, except by inoculation, the infection scarcely ever acts upon the constitution, in general in the space of eight days after its application.

Case 8.—Dr. Rosen Von Rosenstein, has related that about the year 1756, a child had crusts and scars of the small pox upon its body when it was brought into the world; for the eldest son had the small pox a little before this was born. All the other children got the small pox six years after that, except this, who certainly had had the infection already in its mother's womb. This case is so very ambiguous that I should not have stated it, if it had been related by a less respectable physician than Von Rosenstein.

Case 9.—Baron Dimsdale, in his *Treatise on Inoculation* in 1766, states that a woman with child was inoculated, and had a small crop of pustules; that in nine weeks afterwards she was brought to bed at the full time of a living child with distinct marks of the small pox upon it.

Remark.—Perhaps it may be regretted that our doubts were not removed by inoculating this child.

Case 10.—In December, 1776, the case of Mrs. Ford occurred, which is stated by Mr. Wastall, and communicated by Mr. Hunter, in the *Philosophical Transactions*, vol. lxx, p. 128. The small pox seized this woman when far advanced in pregnancy; and on the twenty-third day after the eruption she was delivered of a dead child covered with eruptions, which Dr. Leake, Dr. Hunter, Mr. Hunter, Mr. Cruikshank, Mr. Falconer, and Mr. Wastall, considered to be the small pox in the state of suppuration. Dr. Hunter it is stated, thought the eruption like the small pox: "that he could hardly doubt;" but said "that in all other cases of the same kind he had met with, the child in utero escaped the contagion." This case is very similar to that of Mary Sheers, which fell under my obser-

vation; but hers was the inoculated small pox, and Mrs. Ford's the natural sort.

Case 11.—Is that published in 1781 (*Philosophical Transactions*, vol. lxxi, p. 372) by Dr. Wright. A negro woman, a fortnight after the eruption of the small pox in the natural way, was delivered of a child with eruptions, like those of the small pox, on the eighth or ninth day, in favourable cases. The child had many eruptions, and died in three days. The mother had a very small number of pustules and soon recovered.

Case 12.—In 1781 a case was published by Dr. Bland in the *London Medical Journal*, vol. ii, p. 205, of a woman who in the seventh month of pregnancy had the confluent small pox. Six days after the turn, and eighteen days after appearance of the eruption, she was delivered of a dead child, covered with the small pox, full of matter, and seemingly arrived at maturity. The mother supposed her child had been dead five or six days before the delivery.

Case 13.—In 1784 a case was published in the *Medical Journal*, vol. v, p. 399, by Mr. Roberts, of a woman who was inoculated in November, 1783. She was in the ninth month of pregnancy. The infection with the usual appearances. When the eruptions were drying up, she was seized with rigor and other symptoms, and felt as if the child then died, of which she was delivered the day after, as was expected, dead, and also covered with seemingly variolous eruptions.

Case 14.—In a general inoculation at Painswick, in 1785, of which there is an account in the seventh volume of the *Medical Journal*, a woman nearly eight months gone with child had the inoculated small pox. In about four weeks from the time she was inoculated, she fell into labour, and brought into the world a dead child, with about thirty pustules upon it. The foetus, according to the feelings of the mother, had been dead five or six days.

Case 15.—The account of this case, by Mr. Lynn, consulting surgeon to the Westminster Hospital, was read at the Royal Society in February, 1786; but the committee not thinking proper to publish it, this valuable and perhaps only decisive instance of the small pox in the womb, would have been unknown by the public if Mr. Lynn had not printed his paper in August, 1786, as read at the Royal Society. The fact in this case is also truly satisfactory, because it is attested by a man distinguished for superior accuracy and skill in his profession. I shall give the account of this case in the author's own words, as any other representation of it would be less honourable to him, and less useful to the public.

In November, 1785, the wife of Mr. Eve, a coachmaker in Oxford-street, being then in the eighth month of her pregnancy, was seized with rigors, pain in the back, and her febrile symptoms. In two days' time the

disease showed itself to be the small pox; and though the pustules were of the distinct sort, yet they were uncommonly numerous. On the 11th day, they began to turn; and on the 22d day, her labour took place, which according to her reckoning, was a fortnight before the regular period; that is, when she was advanced in her pregnancy, eight months and two weeks. The child at the time of its birth, was covered with distinct pustules all over its body. They did not appear to be full of matter till three days after; at which time I took some of the pus upon a lancet, from one of the pustules upon the face. With this lancet I afterwards inoculated, on the 2d of December, 1785, a child of Mr. Chater's, in Church-street, Soho, in both arms. On the 7th, the inflammation began to appear in each arm, and continued daily increasing till the 11th of December, when the child sickened, and was affected with all the symptoms which usually precede the eruption. On the 12th, the sickness and fever abated, the pustules of the distinct sort of small pox made their appearance, and the child, having regularly gone through the several stages of the distemper, was perfectly well in three weeks. As in all the decisive cases I had collected, except Mr. Lynn's, the child was born dead or died soon after birth, I was desirous to see the subject whose case is just related; but on inquiry, I found it also died about the fifth day after its birth; an event which it was not thought necessary to notice in the account published.

Case 16.—In Dr. Hagarth's work on the small pox, lately published, mention is made of a woman who was seized with the small pox in the 9th month of her pregnancy and who, "not long after," was delivered of a dead child that had distinct variolous eruptions over its whole body.

Case 17.—By permission of Dr. Woodville, Mr. Wacksel Apothecary to the Small Pox, Hospital, was so obliging as to show me a foetus preserved in spirit, which has apparently variolous eruptions upon it. This child was born dead by a woman in the 8th month of pregnancy about a fortnight after she had got well of the inoculated small pox. Besides the above cases which are on record, or which I have seen, I know of several more of the same sort, which have been communicated to me by medical practitioners.

Case 18.—Dr. Ford of Bond Street informs me that the case of Mrs. Marsh of Bristol fell under his observation. When in the 8th month of her pregnancy she had the natural small pox very severely; and soon after she had gone through the disease, she was delivered of a dead foetus, with such appearances as no one among the number of practitioners who saw the child could doubt to be the small pox. The eruptions in this instance appear to have been dried.

Case 19.—Mr. Jones of Mount Street, on whose accuracy and fidelity I can safely de-

pend, saw the case of a woman who was inoculated when seven months gone with child. Soon after the eruptions, which were few in number, had dried up, she was brought to bed of a dead child that had a numerous eruption of pustules which were quite flat, but which he thinks, no one could doubt being those of the small pox.

Case 20.—The same practitioner had a woman in the natural small pox, with very numerous eruptions, under his care, who was in the 8th or 9th month of pregnancy. While the disease was going off, or in the stage of desiccation, she was delivered of a dead child with a number of quite flat eruptions, which he judged to be most certainly variolous.

Cases 21 and 22.—Dr. Hossack, an ingenious young physician from Philadelphia, (who was recommended to me by Dr. Duncan, and is now attending lectures in London with great assiduity), has favoured me with the two following cases in a letter dated London, March 22, 1794. "In the summer of 1791, the small pox was by accident introduced into the town of Alexandria, State of Virginia. As soon as observed, most of those who had not had the disease were inoculated; about nine hundred in all. Notwithstanding the great heat of the weather in the month of July (the thermometer, upon an average at 12 o'clock in the day about 90 deg.) the disease in general proved so mild that it became a prevalent opinion with several physicians, that summer, although it had been hitherto so much dreaded, was the most proper season for inoculation. Among other facts of importance upon this subject which presented, (and which will no doubt be shortly published by Dr. Dick, a present eminent physician at Alexandria) two cases occurred of the small pox affecting the fœtus in utero producing miscarriages.

The first was a lady, in about the 5th month of her pregnancy. As she was exposed to the infection, she submitted to inoculation. The disease as usual was so mild that she scarcely experienced any inconvenience from it; having but a slight fever, and very few pustules. Notwithstanding the apparently favourable termination of her disease, about a week after her recovery, as it was thought, that is, about four weeks from her inoculation, she felt a weight and uneasiness at the lower part of her abdomen; and the motion of her child ceased. In this state she continued about three or four days, when she was taken in labour and delivered. The child was dead, but had no appearance of putrefaction. The skin was thickly covered, but with distinct spots which every person who saw the child, (among others were two medical gentlemen) pronounced to be small pox. The mother experienced no bad effects from it, but in a very short time recovered.

The second case was a lady, who from an apprehension of danger both to herself and child, declined inoculation, expecting to escape the disease altogether. But she unfortunately received the infection in the natural way. She was in about her 7th month of pregnancy, of a good habit of body, and had enjoyed good health. The disease however proved of the confluent species, and very violent. In the last stage of it, when the pustules were drying away, she observed the motion of her child ceased, and felt it as a heavy weight, occasioning some uneasiness and a bearing down. Notwithstanding this unfavourable circumstance the mother continued to get better; was free from fever and the pustules dried away quickly. In short, so favourable was her situation that I still could not give up all expectation of her child's safety. In this anxious state she continued, (in the meantime, even attending, in some measure, to the offices of her family), until about three weeks from the time she first perceived the motion of her child to cease. She was then taken in labour, and delivered of a dead child. It smelled extremely fetid, and appeared to have been dead a considerable time. Its whole skin was thickly covered with small dirty coloured spots which could not, under the above circumstances, have been anything but the small pox; and which would have been pronounced such by every person who had ever seen the small pox in any of its forms."

Observations.—From the very small number of instances in which the fœtus in the womb appears to have been infected, amongst the great number of pregnant women affected with the small-pox, we may safely conclude that this disease, in such cases, very rarely extends to the fœtus. The proofs of the fact upon which this conclusion is founded, are from the children of those having the small-pox after birth; and from the absence of eruptions in abortions constantly before the seventh month of pregnancy; and generally, in premature births, at a later period.

From the very small proportion of persons who are supposed to be susceptible of the variolous matter, although their mothers, while pregnant, who had, already passed through the small-pox, were exposed to the influence of this poison, and from there not being a single satisfactory proof of this disease in the womb of such women, it may reasonably be doubted, whether the small-pox ever takes place in the uterus, except from infection generated by the mother.

In all the above cases of the supposed small pox in the womb, in which the disease appears to have been communicated by the mother's infectious matter, the time of the action of the infection in the fœtus may have been the same as in the natural small-pox in the air, which we may reasonably suppose to be the case: because, under both circumstances, the

variola is probably conveyed into the constitution along with the aliment, whether that be oxygen which enters by way of the lungs or animal and vegetable matter, which enters by way of the alimentary canal.

It appears from the above cases and others on record, that the natural small-pox in pregnant women is fatal in at least 19 out of 20 cases to the foetus in the womb, and to three-fourths or four-fifths of the women. Nor is there, perhaps, a single decisive instance of a patient going through the disease of the womb, and being afterwards, born alive. It is not even clearly proved that a child, born with the small-pox, has survived this disease.

On what circumstances this fatality to the foetus depends we know not; but it is obvious to suspect three, viz :—

1st. The foetus being immersed in a liquid.

2dly. The small quantity of oxygen taken into its constitution, and that only through the intervention of the mother.

3dly. The temperature of the surrounding medium of fluids and solids being 97 or 98 deg.

It is particularly worthy of notice that the foetus, in the womb, dies with a smaller number of eruptions upon it than scarcely ever happens from this disease after birth.

There are some facts to shew, that it is probable a very small proportion of pregnant women die by inoculation, although the foetus is generally destroyed. All calculation is liable to much inaccuracy in the present state of facts; but in about 40 cases of pregnant women inoculated in almost every stage of pregnancy which I could state on the authority of Sir George Baker, Baron Dimsdale, Dr. Ingenhouz, Dr. Woodville, Mr. Wacksel, and from the above cases one died, as stated by Sir George Baker to have happened in the sixth month of pregnancy; but, I am sure, not one in a hundred dies at earlier periods of pregnancy than seven months.

There is no reason to suppose that the mother's constitution is at all disordered by the small pox of her foetus, although premature labour and parturition are very liable to come on during the disease of the mother.

It appears from the above cases, that the disease in the mother and foetus are not always in the same degree; for that in some cases the mother has the disease severely and very numerous eruptions; but the foetus has a small number of eruptions. And on the contrary, at other times the mother has the disease slightly and few eruptions, but the foetus a great number of pustules.

If it be allowed that the above statement of instances of small-pox in the womb establish the fact that the foetus is not infected by the variolous matter that infects the mother, and that the foetus is never infected but by variolous matter generated by the mother, it seems highly probable that this fact will be frequently referred to in physiological and pathological reasoning.

Such are the facts collected by the late Dr. Pearson, one of the most eminent physicians of the last and present century; and I deemed his essay so valuable that I copied all the cases related in it. This I considered necessary in confirming the generally received opinion of the most learned physiological and experienced physicians—that certain contagious and other diseases as well as the moral and physical characters of parents are transmitted by them to their progeny.

Dr. Jenner inoculated a woman, May 6th, 1808, who was delivered June 11th, the body of her infant being covered with incipient small-pox. New pustules appeared on the following day, and the infant died of convulsions eight days after birth. (Med. Chir. Trans. vol. i.) There is a specimen of congenital variolous eruption in the Museum of Guy's Hospital in London, taken from an infant whose mother was a patient under the late Mr. Laird at the General Dispensary, Aldersgate Street. Ann Howard, aged 26 years, the mother of one child, and pregnant of a second, laboured under the eruption of small pox, August the 30th, 1805. She was admitted, Sept. 2nd. Numerous confluent pustules were observable on her face and arms. The eruption was distinct on the body and inferior extremities. About ten days after her convalescence, she felt the motion of her infant two or three times, but did not after that period. She was delivered on Sept. 28th of an infant aged about six months. It had been dead for some time, as there was desquamation of the cuticle of the abdomen and hands, and putrefaction had commenced. There was a well marked variolous eruption on the back, shoulders, and particularly on the superior part of the neck; the pustules were distinct, elevated, with a depression in their centre. Similar cases are recorded by Bartholin. (Epist. Med. Cent. 2, p. 682; Philos. Trans. abridged, vol. iii, p. 308; Hildanus, Dolæus, Fernelius, Castor, and Boheroave, according to Van Swieten. (*Variola*).

M. Rayer states on the authority of Vogel that infants have been born who laboured under measles. M. Duges has detailed several cases in his inaugural dissertation of cutaneous inflammations, observed in new-born infants at the Maternity of Paris. M. Billard has seen erythema in different patches on new-born infants, which closely resembled measles. Congenital pemphigus was observed by Mr. Lobstein of Strasburg (Journ. Complém. du Dict. des Sciences Méd. t. vi, p. 3); but this was supposed a syphilitic eruption, by M. Duges (*Op. Cit.*); but others agree with the former opinion.

Pemphigus.—The epidermis of the sole of the foot, toes, palm of the hands and fingers, is raised sometimes in the foetus by the slightest contact; more rarely is general desquamation of this membrane met with.

Dr. Joerg, has, nevertheless, met with it once in an infant, born at the natural period, and well in other respects. This disease, attributed by some to syphilis, is always accompanied with great debility, and generally causes the death of these infants which are affected with it, in a few days, from the pain and inflammation of the skin, which result from the denudation of this membrane. It is sometimes accompanied with an eruption of pustules, which are principally developed over the soles of the feet and palms of the hands, and which always resemble vaccine buttons at the thirteenth or fourteenth day of development. Gœckel and Ledel (*Mémoires des Curieux de la Nature*) have seen new-born infants whose skin, covered with pustules or vesicles filled with serosity, was afterwards completely excoriated.

It is easy to perceive, in the different affections of the skin, all the characters which are attributed to the true pemphigus of adults. Ohler has observed vesicles, of the size of a pea, which were developed over the whole of the skin, and especially within the intervals of the fingers and toes. At the commencement they were surrounded with a red circle, they filled in a short time with a serous liquid, which soon changed into pus; then they discharged. The course of this exanthemata was not more than forty-eight hours. M. Desermeaux (*Dict. de Med., Art. Œuf*), who has also related this case after Ohler, thinks that this eruption ought to be considered rather as a varicella than a pemphigus.

Elephantiasis.—M. Chaussier has seen two infants at the Maternity of Paris, with disease of lower extremities similar to the elephantiasis. This solid, indolent swelling occupied the feet, legs, and a part of the thighs, there was neither heat, redness, nor sensible alteration of the skin, pressure did not cause pain or pitting as in œdema; and the disease was circumscribed as if a ligature had been firmly applied round it. On dissection the thickness of the skin was not increased, but the cells of the subcutaneous cellular tissue were filled with a white compact fat, and their areola filled with a sero-gelatinous fluid, which was readily squeezed out on pressure. —(*Dict. des Sciences Medicales, Art. Monstruosites*).

Scales on the Skin.—M. Sallpart van der Weil, has seen a fœtus whose whole body, except the head, was covered with scales, and exhaled a most unpleasant odour. When the scales fell off, they were replaced by new ones; and when rubbed off the surface, bled freely. (*Cent. Poster. Obs. 35*).

There are various other cutaneous diseases which have been observed on the infants soon after birth; but as they occur at a future period of life, I shall describe them fully hereafter.

SELECT LECTURES,

FROM

M. BROUSSAIS'

*Course of General Pathology and Therapeutics,
translated and revised*

BY JAMES MANBY GULLY, M.D.

LECTURE III.

Inflammation—Causes of Inflammation— External Inflammations.

ANOTHER peculiarity of the phenomenon of inflammation, is its power of changing locality; and this takes place in various ways: either a series of organs are sympathetically stimulated by the principal focus, at the same time that one of them seems to attract to itself the entire nervous activity, the primary inflammation leaving the first point it occupied, and passing to that single organ, or else it is propagated, makes way, and meanders internally as it sometimes does externally, passes from one organ to another, ever in progress, ever changing its position, at one time intense, at another feeble—so that it is impossible to avoid the observation of these displacements in contemplating an inflammatory process that has not been put down in its commencement;—or lastly, the change of place occurs in an irregular and inexplicable manner, when the inflammation is extremely intense. Thus, it will be found that inflammation is not a fixed phenomenon, it is ever moving about the organism—a fact that should always be borne in mind.

In order to remember more easily the nature of these displacements, they may be classed as follows:—1. Passage in the same organ: here the inflammation tends from one point to another of the same organ: the instances are the skin and mucous membranes; 2. Passages to organs of the same character, but situated in different regions of the body; 3. Passage from the exterior to the interior by the cellular tissue, by the continuous membranes and by the nerves; 4. Passage from the internal to the external parts by the same routes.

The idea of inflammation should never be given up and its existence forgotten because it is no longer felt and pain is no more perceptible. In fact inflammation is never very painful except when it involves tissues wherein nerves of relation or the cerebro-spinal abound, and such instances are found principally on the external parts, in the skin, which is, as it were, our sensitive cloak; but even in pain it is exceedingly transitory, for early combatting with the inflammation soon dulls the exaggerated sensibility. At the same time it rarely happens that pain is so slight that inflammation of the dermoid tissue cannot be traced by it. Internally the phenomenon of pain is not so palpably manifested; our relations with our viscera are far less felt. These for the most part are only painful at the com-

mencement of inflammation: subsequently they are not felt at all. These relations, however, vary with individuals, some being naturally more obtuse in their visceral sensibilities than others.

When there are several inflammatory points they simultaneously transmit their influences to the brain: in this case there is a confused feeling, the patient can give no distinct account of his sensations, and describes them collectively as *malaise*.

Thus you may perceive that pain is by no means to be relied upon in detecting the precise seat of inflammation, when this is internal, and sometimes not even when it is external; for we shall see that it is not always in proportion to the intensity of the disease.

We have seen that inflammation may pass from one point to another, be propagated simultaneously in several organs and proceed from within outwards and vice versa. But it is never generalized, and on this fact I beg you to reflect. They often speak of general diseases, but it would be difficult to shew such. True, there are apparently general phenomena—for instance, when the whole nervous system is in an excited condition—but still there are always points in which irritation is more at work than in others. What generality is there in the decided febrile state? You may answer, the rapidity of the blood's motion. Yet this is not everywhere the same. Neither pain nor the circulation, nor the nervous system in a state of general disturbance, constitute disease in the majority of other cases. Inflammation may involve the entire skin, but then it spares other organs: it may occupy all the mucous membranes, but then it spares the parenchymatous organs: it may pervade the parenchymata, but then it avoids the serous tissues, and so on. The diseases which exhibit the most extensive inflammations are the eruptive phlegmasiæ, of which I make anticipatory mention in order to have facts to present to you.

It is then possible to have inflammation in all the tissues, but not in all at one time.

Inflammation sometimes disappears spontaneously. Frequently an irritation having the characters of inflammation and that appears likely to end as it does, suddenly ceases, is transmitted elsewhere, or passes away altogether with the morbid state. Subsequently it returns. This constitutes the intermittent irritations. This kind of irritation cannot be separated from the continuous, inasmuch as, first, it is observed in all cases where inflammation, sub-inflammation and other shades of irritation are possible: secondly, because an irritation at first apparently intermittent, as it acquires fresh activity, changes into a continued form and produces the same disorders as that form: thirdly, because an irritation absolutely continued changes its form after undergoing certain modifications, and be-

comes intermittent; fourthly, because a manifestly intermittent irritation is often so much kept up by a continued inflammatory irritation as that on the disappearance of one, the other is arrested. Inflammation and congestive inflammatory irritation are therefore nearly allied; they can neither be studied separately nor can they be formed into two distinct classes of diseases.

Inflammation always alters the composition of the fluids; in the first instance, in the part where it is situated, the fibrin and albumen being decomposed, making thus the decomposition of the solids and fluids in that part simultaneous; subsequently it alters them in the other parts of the body, as is remarked in the fibrin of the blood, the relations between it, and the cruor changing so soon as the inflammatory condition is established. But besides these changes others occur in the progress of inflammations. The blood always becomes less fibrinous and more serous; and when inflammation has yielded pus and caused effusions, congestions and decompositions of various fluids, some portion of their molecules is sure to be absorbed and to taint the circulating blood. This in no way militates against the principle of applying our modifying means to the inflammatory state itself and not to the fluids; for let their deterioration have been ever so great, so soon as the inflammatory action ceases, the laws of the system are quickly re-established in their healthy condition.

Causes of Inflammation.

We now proceed to examine the causes of inflammation, which you will never comprehend in any other way than by reflecting on the modifications they produce in the tissues. In this view the phenomena that accompany its development may be reduced to two principal ones, which—conforming to the ordinary language—we shall call the proximate causes; one is nervous irritation, the other sanguineous congestion.

Irritation of the nervous matter is indispensable to inflammation, but is not uniformly the first cause of it.

Sanguineous congestion is also necessary to constitute inflammation, but it is not the most common cause of it: the most ordinary is nervous irritation, which is developed and produces inflammation upon the operation of various causes. It may be induced—

1. By external violence. When a part has been incised, bruised, or dragged, the phenomenon is pain (we suppose the hemorrhage to have been arrested). After the pain comes congestion, an afflux of serosity and blood, the sero-sanguineous effusion. The serum disappears, the blood alone accumulates, and inflammation appears in the lips of the wound.

2. By the introduction of foreign bodies to the surfaces of relation, the respiratory, gastric, or genito-urinary passages. On such introduction there is first, augmentation

of the secretions, then sanguineous congestion. The true inflammation afterwards predominates, and by it the secretions are for a short space stopped.

3. By a forced augmentation of innervation without the existence of either of the preceding causes. If you keep an organ in constant play, you change its vital physiological elevation into a vital pathological elevation or inflammation.

4. By irritating molecules that circulate with the fluids. These molecules develop irritation in different points, in the brain, in the digestive apparatus, in the lungs, the genital organs &c., and to their history is referable, the absorption of all irritating matters.

5. By congestions. Blood accumulated in a part irritates it. In fact, that fluid may be, like the too great influx of nervous energy, an irritant to the body: for whether we call the nervous power electricity, galvanic principle, or biotic imponderable, it is no less a matter, which by its accumulation produces irritation. So also of the accumulation of blood in a part. Should the disposition to irritation be added to that which causes the blood to accumulate, you have a phlegmasia in which irritation is chiefly prominent; this combined action may be remarked in the changes of nervous influx and distribution of blood that occur repeatedly in the twenty-four hours. It is well known that when heat surrounds the body the blood tends to the external parts, the veins swell and the arteries beat more vigorously, and that when cold is applied the blood is repelled to the internal parts, and accumulates in the viscera. This species of swinging motion, which occurs repeatedly in the same day and with varied degrees of vigour and duration, of flux and reflux, or, if you please to call it so, this alternation of centrifugal and centripetal movements, fatigues and irritates the organs; and should an irritative tendency exist, inflammation is generated and receives from it more strength and obstinacy. But it is difficult to separate completely the phenomenon of irritation from that of congestion as the cause of phlegmasia. One of the facts in favour of congestion in that character is, that when vigorous individuals are in the habit of undergoing certain kinds of efforts, either from taste or necessity, they are attacked with spitting of blood, and immediately afterwards with inflammation. However the fact may be with regard to this priority of nervous irritation or sanguineous congestion in producing inflammation, it is still certain that in them we have the two fundamental causes of that phenomenon.

Having premised these considerations, we may without difficulty connect them with those of the hygienic modifiers and use them to assist us in investigating the causes of inflammatory diseases. You may thus learn that the difficulties of pathology are

not so great as they appear, and that to avoid them you need only follow the method indicated by the identity of causes, a method that saves much repetition and confusion. And it is not without cause that we attach so much importance to the consideration of causes, for the more we know of them the more easily shall we find the remedy; some deny this, but their's is a want of reflexion.

We arrange the causes of inflammation according to the order of the materials included in hygiene.

1. *Applicata*. These give us all the surgical inflammations, which should be referred to irritation.

2. *Gesta*. You already know how the forced action of an organ produces inflammation of it. Violent exercise that causes the blood to circulate with too much impetuosity always ends in the inflammation of some great viscus. No diseases are more serious than those consequent on long forced marches; and such are more particularly violent if the body, after the exertion, be seized with cold, or if, during the exertion, some vehement external stimulus, as heat, is operating.

3. *Ingesta*. Too much or too stimulating food determine, on their contact with the stomach, irritations upon which inflammations of the mucous surfaces or of the organs connected with them ensue. By furnishing a superfluous quantity of nutritive material they enrich the blood so as to render it irritant. They also act indirectly, by arousing the passions and leading to acts that disturb the economy. In food will be found one of the most common causes of inflammation, for with it, irritating and more or less acrid matter enter the body and light up organs that are but too ready to be acted on.

4. *Percepta*. Strained exercise of the intellectual faculties is a powerful incentive to inflammation, and no wonder it is so, since the matter that serves to innervation is itself a stimulant. Neuroses are frequently followed by inflammation; cut or tie a nerve, and an inflammation or abscess straightway forms in the part to which the nerve is distributed. Moral affections and the passions determine visceral congestions, disturb the order of the secretory organs, disorder the bile, saliva, &c. and even cause hæmorrhage and sanguineous secretions. I have seen anger produce phlegmonoid, and even gangrenous erysipelas.

5. *Circumfusa*. The atmosphere may be an irritative cause if it is too active, or if there is a necessity for its very frequent respiration. You may perhaps scarcely credit it, but it is certain that too pure an atmosphere is capable of producing an acute phlegmasia, or of communicating a greater activity to already existing inflammations. Like water and other media the air may cause disease by variation in its temperature. Cold air is an indirect stimulant which pro-

duces inflammation, either by repelling the blood to the interior of the body and causing congestion of the viscera, thus leading to their inflammation and super-secretion: or by a re-action, by which the inflammation seizes the part first attacked by the cold. If the impression is insufficient to produce this re-action, the skin is still more sensitive and even painful; this is seen in very frosty weather, when the sensibility of the whole body is increased. It is true that this sensibility decreases with habit, but that is a subject involving the theory of acclimations. The atmosphere, moreover, acts by the medium of the irritative corpuscles with which it is loaded, and which sometimes find entrance to the body.

You see then how multiplied are the causes of inflammation and the use of subdividing them: I have only stated them generally, because we shall return to them in speaking of the individual species of inflammation. But before dismissing the subject, we will consider them in another point of view, and divide them into two series—those that are ordinary, usual, and produce inflammation of a decided cast, easily recognised, and easily treated: and those that give the inflammation a specific modification by which its progress is so disordered as to render it less tangible, and less tractable by the physician than in the most ordinary cases. For the physiological physician makes what he pleases of ordinary inflammation when he takes it: *ab initio*, whereas when the causes in question have come into play, the scene is changed, either in consequence of the alteration of the fluids or the derangement of the principle of innervation by them. The inflammations that ensue upon this second series of deteriorating agents should not be considered in conjunction with the others, because if you confound them you thereby increase the difficulty. In proceeding from the more known to the less known, I shall first descant on the ordinary inflammations that bear the greatest similarity to each other.

After the causes comes the theory of predispositions by which inflammation is variously exhibited in different individuals; in the strong, well-constituted, powerfully digesting, inflammation has always an un-deviating and palpable progress that is not easily modified; in the feeble, ill-developed, who are excitable to all the causes of disease, and have been reared in a bad atmosphere and with improper food, the physiological state is actually pathological, and the inflammations they suffer from, have neither the appearance nor the true progress exhibited in the former. Important distinctions are also founded on the age and sex. There are likewise depraved conditions produced by previous disease, that should be taken into account.

We shall now, as before said, proceed with the examination of the ordinary in-

flammations situated externally, and whose existence is readily detected.

Cutaneous Inflammations.—The skin takes on three forms of inflammation, the erythematous, the furuncular, and pustular. We first speak of the erythematous in its primary character, and not as proceeding from an internal inflammation.

Erythematous Inflammation of the Skin, or Erysipelas.—The external and internal causes of this inflammation are those of inflammation in general, that is, every thing that accumulates irritability or produces plethora; youth, the sanguineous temperament, hot climates on one of moderate climes, vicissitudes of temperature—a very common cause—all kinds of cutaneous excitations caused by irritating rubefacients and frictions, proximity to great heat, &c.

Erysipelas presents the four known characters of redness, tumefaction, heat, and pain, and is one of the principal types of inflammation. The heat is sharp; the redness gradually diminishes, and is insensibly lost in the normal skin, disappears on pressure by the finger, which pressure leaves a white mark: this last does not take place, however, if the inflammation be intense. If the inflammation is still more intense, the subcutaneous cellular tissue swells and becomes phlegmonous; pustules appear on the surface; these, indeed, are seen in almost all kinds of, erysipelas, but more particularly in shingles (*zona*), which is true erysipelas, and should not be isolated merely from its peculiar form. You may tell me it is connected with gastric affections, but I have seen it primary and altogether independent in character.

Let us now apply what has been said of propagation and dissemination to erysipelas. In the first place it is propagated and extends without changing its locality, and in this manner sometimes covers a large surface. In the next place it changes situation and wanders over the skin, leaving its former positions clear. If simple, it may disappear and leave no trace; if phlegmonous it does not disperse, it suppurates, produces abscess, and occasionally forms an eschar or tissues rendered gangrenous by the excess of inflammation. It is for the most part difficult to assign any particular progress and spontaneous termination to erysipelas, for it is rarely left to itself, and always modified in some manner. But when no treatment is applied, what ensues? enormous deterioration of tissue. In the army I have seen cases left to themselves that proceeded with frightful stride, causing purulent deposits, disorganizations, mortified shreds, absorption of pus, and finally inducing fatal cerebral phlegmasiæ.

Regarding the manner in which the phlegmasia in question is disseminated in the system, you observe at its commencement malaise, tremor, inquietude, and then by a further step, loss of appetite, thirst, red

tongue, frequent pulse, gastric heat and sensitiveness, in a word, the development and addition of an internal phlegmasia, itself tending to extension and propagation through the viscera—as the erysipelas did in the skin—with a *cortège* of symptoms and disorganizations that it would be premature at present to detail. In such an instance you have a complicated and possibly fatal disease. Should it prove so, you may by dissection ascertain the existence of such external disorders, as redness and injection of the skin, the thickening of the dermoid tissue, infiltration of sero-sanguinolent fluids, pus and putrid sanies into the subcutaneous cellular tissue, collections of decomposed matters, gangrenous shreds, &c. On the internal appearances we shall dwell when treating of the visceral phlegmasiæ.

You see then that erysipelas is not so simple and indifferent an affection as might be imagined; for it shews you how it is that diseases succeed and are connected with each other. You have doubtless seen abundance of cases of erysipelas, and will be inclined to think it idle in me to rest so long on things you are so well aware of, though I have avoided the prolix details. But this is my own manner, and it will lead to the demonstration of the connection of the facts mentioned with other diseases, and shew you that no disease, however common, can well be passed over.

On what do we ground our prognosis?—You can answer for yourselves: on the degree of propagation in the skin and dissemination in the viscera. So long as erysipelas is simple, superficial, not phlegmonoid and slow in its progress, the prognosis cannot be unfavourable. But should its march be rapid, should it traverse the skin, reach the cellular tissue and become phlegmonoid, you may be sure that there will be dissemination into the interior, and that a consecutive inflammation of the digestive mucous membranes, and, perhaps, of the vertebral and cerebral membranes also, will be developed; the danger is then urgent, and death more than likely. The latter can only take place however in consequence of the extension of the inflammation into the viscera, for no one dies of external disorders—an incontestable and memorable truth.

Attend to the treatment of erysipelas.—When incipient, slight, and superficial, it is sometimes successfully combated by astringents, the salts of lead, cold lotions, and by the simultaneous application of narcotics and astringents. In this stage it may even be put a stop to and irritated with impunity by lunar caustic, mercurial frictions, or ablisters. This may be very well when the irritative impulse is not sufficiently forcible; but if it possesses a certain vigour and tends to pass the skin and become phlegmonoid, these means only precipitate its progress and hasten the inflammatory and nervous dissemination. For the rest, this increased tendency to dissemination in consequence of the inopportune use of such means is not pecu-

liar to erysipelalous inflammations of the skin: the same danger obtains in treating internal inflammations in a similar manner.—Mark this fact; for our doctrine is so coherent that all its truths are connected, and are, as it were, within each other.

The remedies alluded to are only proper in erysipelas in the degree of erythema, or that which Cullen called erysipelas from external causes. As to that which he considered as analogous to variolous eruptions, the mischief of treating it in this manner would be still greater. This is a most important distinction to be made in determining the treatment of affections of this kind. In fact, though there can be no doubt that an internal inflammation may cause the development of erysipelas, and give it a more rapid march, yet it does not follow that in all the severe cases of that disease there should be, as Stoll said, an internal disposition or gastric condition, either bilious, mucous, or inflammatory. Very serious and extensive erysipelas is observed without anything of the kind; and this fact allows us to present erysipelas as an example of a primary inflammation that is able to disturb all the functions by self-propagation and dissemination. In treating it therefore, we must not consider ourselves bound to be incessantly purging, vomiting, or bleeding the patient: it is only incumbent on us to take the fact as we receive it—if the erysipelas is slight you may try the arresting treatment mentioned above. But if it is intense and phlegmonoid, you cannot, it will be dangerous and you will be rash. Rather employ local bleedings, which are always useful, and general ones if there is plethora. Practice the latter freely and copiously, particularly if the inflammation, having passed to some internal part, pulmonary or cerebral congestion is present; in that case do not fear to repeat the bleedings as often as that congestion inclines to a renewal—it is the only condition of your decided success. If gastritis or gastro-enteritis is present, either in a primary or consecutive character, attack it in like manner, allowing, however, the local bleedings of the abdomen always to exceed the general. The drinks ought only to be demulcent and refreshing. Lastly, if the erysipelas has become phlegmonoid, suppurating, gangrenous, you are obliged to use means, the consideration of which makes no part of this course. During convalescence, prudence in regimen and other hygienic means constitutes the true treatment. However—and this should never be slurred in the treatment of all inflammations whatever—care should be had to restore any suppressed evacuation, menses, hemorrhoids, &c., or supply their place.

Furuncular Inflammation.—In order to bring together into one final point of view all the external inflammations, I shall now pass to the consideration of the second form of them, the furuncular or perpendicular inflammation of the skin. Its causes are to be found

in all prolonged irritations of the skin. It is impossible to say wherefore these irritations produce furuncular inflammations in some, and erysipelas in others; individuals so constituted however most certainly exist. In either case a relapse is to be dreaded.

The predisposition to boils consists in the irritability of the nervous and sanguineous systems; but we must materialize this irritability, otherwise it is vague. Those who have unusually irritable, nervous, and sanguineous systems also carry in the respiratory, digestive, and genital mucous membranes a shade of irritation which is ever ready to be raised to the inflammatory point, and which meantime causes an incessant inquietude of the nervous centres, maintaining in them a state of agitation proportionate to its own activity. Such individuals, whom a too stimulating mode of living places in this state of inflammatory irritability, are also liable to actual inflammation from the slightest causes: and boil is among the affections that this cause may induce.

A boil is a small, red elevation, limited around the skin, accompanied with sharp pain, itching, and subsequently with burning pain. A swelling rises round it, the redness changes to brown, a yellow point appears at the summit, where there is also an excoriation. An autopsy of the boil is one of the remedies, and if we practise it we shall find a head of cellular tissue traversing the depth of it, swelled, forcibly separating the fibrous network of the dermis, already in a state of suppuration, acting like a pin that is passed through the skin. The disease progresses until this cellular tissue, or core, as it is called, becomes isolated and detached by suppuration; it is like a worm, and may like it be drawn out, leaving an empty space behind it. After this abstraction, the swelling diminishes, and all returns to a state of quietude.

The above is the most simple form; for it sometimes happens that the cores or suppurated cellular shreds are multiple and confluent, and thus foment the intensity of the inflammation, the propagation and dissemination of which are then to be feared, whereby more or fewer of the phenomena displayed in erysipelas are produced. When at this degree the disease takes the name of anthrax or carbuncle. The cellular tissue surrounding this constricted group of cores swells, becomes phlegmonous and the inflammation by extension may produce erysipelas. Here then is a very evident propagation. Things may go sufficiently far to cause dissemination, but this is rare. More ordinarily, the disease, after causing fever and considerable pain, ends, and the portion of skin interposed between the small cores of cellular tissue fall into gangrene, and an actual eschar forms: in simple boils such do not form; it is only when several cores together distend the skin in a violent manner, and the excessive inflammation of the cen-

tre annihilates life there, that we have eschars. In these cases a loss of substances as large as your hand may occur, but once detached, every thing becomes quiet of itself. Not but that internal and very intense inflammations requiring active treatment may arise secondarily and in consequence of certain predispositions, for such may be observed in all diseases, inflammation being a phenomenon that can neither be considered exclusively nor isolated in any particular organ, its unceasing tendency being to communicate and come into complication whenever it has reached a certain considerable degree of intensity.

In the next lecture we pass to the other points connected with the subject of furuncular inflammation.

Abstracts.

Proceedings of the Hunterian Society, during the Year 1834.

We wish other Societies would imitate the excellent example of the Hunterian, and publish a similar Report to that before us.

It will appear by our extracts, that the names of speakers are not given—a proper proceeding, but merely the results of their observations. If this plan were generally adopted, it would cure many members of their *cacoethes loquendi*.

I. Affections of the Brain and Nervous System.

“*Brain, Abscesses in*;—a case which commenced in ear disease, and proceeded insidiously till it destroyed life. Such cases spoken of as rendered the more important from being not unfrequent.

“*Brain*;—instance of large deposit of fibrine at the basis of—spreading itself on the nerves and vessels, in which the difficulty of diagnosis was exemplified.

“*Brain*;—instance of scrofulous tumours. The patient was an infant, and upwards of twenty tumours were found, and resembled strumous tubercles of other parts. There was serous effusion into the ventricles. Nevertheless, there was remarkable diminution of symptoms before death.

“*Brain*;—degeneracy of structure—imputed to a blow on the head, received eight months before death, and from which injury the patient apparently recovered. Paralysis ensued, and the disease ended fatally.

Epilepsy;—which also arose from a blow on the head. In another case related, the epilepsy arose from a similar cause, and continued during two years, when on the super-vention of diarrhoea the epilepsy ceased.

“*Pedunculated bony Tumour*;—growing from the inner table of the calvarium, and dipping between the convolutions of the left hemisphere. There was sudden death, and a clot of blood was found in each ventricle.

“*Delirium tremens*;—numerous instances were related bearing chiefly on the treatment by opium or depletion. The preponderating evidence was in favour of opium, and solid opium was preferred to the liquid preparation. In one case, 36 grains were taken within 36 hours, in doses of four grains every four hours. In another instance, two or three ounces of laudanum, and forty grains of opium, within a very short period. A state of coma was induced, and the respirations did not exceed five or six per minute, yet the patient recovered. Circumstances were specified under which the combination of opium with ammonia was highly extolled; less opium appeared requisite to produce a given effect. The advantages of annihilating the imaginary object, and of substituting a real one, as a hat, &c. were attested.

“*Nervous System*;—a paper was read on the distribution and functions of those nerves said by Sir Charles Bell to derive their influence from the tractus respiratorius. The author adverted to the fact that the sympathetic nerve is formed before any other part of the fetal animal, so that at birth the functions of assimilation, circulation, secretion, respiration, and voluntary motion, are under its government. The author endeavoured to shew that the precise central origin given to the respiratory nerves does not exist, but that the peculiar powers of those nerves are derived from their connexion with the sympathetic. An interesting discussion, in which some experiments and physiological observations were adduced, in corroboration of the author's opinions, ensued on this communication.

“ II. Diseases of the Thorax.

“*Heart*;—instance of hypertrophy of, with ossification of the mitral valves. In this case, there was pulpiness of the mucous membrane of the stomach and bowels, and a loaded state of their vessels, which, with some suspicious circumstances preceding death, led to an apprehension of poison. It was shown, however, that such appearances in the ali-

mentary canal are not unfrequently observed after death from disease of the heart.

“*Heart ruptured*;—several instances alluded to, in some of which the patients lived 24 hours. In others, death was instantaneous. The rupture most frequently happened in the left ventricle.

“*Aortic valve*;—an instance of its rupture in a boy, from his being frightened at the report of a pistol. He instantly felt pain at the region of the heart, soon became dropsical, and died in a year and a half.

“*Lungs*;—a paper was read on the question whether the parenchyma of the lungs, or the lining membrane of the cells is the seat of pneumonia. The author believed that what is called inflammation of the substance of the lungs, or pneumonia, is not inflammation of the parenchyma, but of the membrane lining the cells. Also that the inflammation is of two kinds, the plastic and non-plastic, with intermediate varieties. In the former, organizable lymph is thrown out; in the latter, there is a grey secretion, which gives the diseased portion the name of grey hepatization, and is much like Castile soap. The products of this inflammation are unorganizable. These two conditions said to differ, ab initio, and to require different treatment—the plastic bleeding and mercury, and the non-plastic stimulants.

“*Larynx and Œsophagus*;—ulcerated opening between to the extent of an inch, in a young woman. There was stricture in the Œsophagus, with ulceration to some extent. For several weeks before death, it was evident, from the symptoms, that an opening into the larynx had taken place. One of the inferior cornua of the thyroid cartilage was denuded, and one of the recurrent nerves exposed. The female in whom these lesions occurred had been the subject of hysteria, and it was suspected that the sympathetic irritation of the parts in the throat had ended in organic change.

“*Œsophagus*;—instance of a pouch at the lower extremity, occasioned by a stricture near the cardiac orifice, so that the food, after remaining only a short time in the dilated portion, returned.

“*Dyspnœa and Dysphagia*;—an instance which arose from nervous excitement.

“*Bronchocele*;—a remarkable instance of,

in which iodine appeared to augment the swelling. Carbonate of soda was then given in the dose of a drachm, and repeated three times a day. The enlargement decreased. The iodine was again tried with the same effect as before, when the soda was a second time resorted to, and with a similarly good effect. Ultimately, however, the disease was removed by the ioduret of iron.

“ III. *Diseases of the Abdomen.*

“ *Stomach*;—instance of perforation by ulcer. A young female servant, in previously good health, was attacked with acute burning pain in the epigastrium. The pulse was 100, soft and compressible. She was bled and purged, and died after sixteen hours' illness. There were two round openings, with slightly inflamed edges, near the lesser curvature of the stomach, through which a quantity of food had passed into the peritoneal cavity. The gall-bladder contained calculi.

“ *Stomach*;—perforated by a woman who stabbed herself. The contents of the viscus flowed out of the wound. She fell into a state of collapse, but was sufficiently sensible to be alarmed at her own act. She endured total abstinence from ingesta for thirty-six hours. She recovered, but ascites followed in four months. This was also removed. It was remarked, that wounds in the stomach heal with greater facility than those of the intestines, from the less activity of peristaltic motion.

“ *Stomach*;—retention of undigested matter in—as carrots, celery, &c.—instance of their proving fatal.

“ *Intestine*;—case in which the duodenum was perforated by an ulcer. The patient had resided in warm climates, and was attacked two hours after supper with acute pain in the epigastrium, and about the right shoulder. There was scarcely any affection of pulse. The contents of the intestine and stomach had escaped. The differences between rupture and perforation were alluded to. It was stated that in rupture the mucous membrane invariably curls over the rent peritoneum, but in ulceration the lesion of the mucous membrane usually extends beyond that of the serous. Ulceration of the bowels was considered of frequent occurrence in persons who have resided in hot climates. Rest and opium were considered to afford the only chance of closing

the opening, whilst the inflammatory stage is to be relieved by venesection.

“ A few cases of ulceration of the duodenum were mentioned, in which obstinate vomiting had preceded death. Other instances were related in which the adhesive inflammation had limited the effusion.

“ *Intestinal hæmorrhage*:—with immense discharges of muco-purulent matter.—A case was related in which alum injections, and acid astringents by the mouth, had been serviceable.

“ *Hernia*;—an anomalous instance of, was related. A man, æt. 67, was seized with vomiting and purging. In his straining efforts, protrusion of the bowel took place. He was placed in a warm bath, and the hernia was reduced. The symptoms of strangulation, however, continued, and peritonitis supervened, but he had no pain or tension about the part itself. In the failure of giving relief, a consultation was held as to the propriety of operation, when it was decided, that as the hernia was not the primary disorder, and appeared to have been reduced, it was not justifiable. The man died. On examination, a small knuckle of intestine was found strangulated in the inner ring, and just within the abdomen a sac containing a larger hernia, also incarcerated, was found. It was thought that the smaller portion had come down after the sac had been retained, and that had an operation been performed it was not probable that the more internal hernia would have been discovered.

“ *Liver*;—a large hydatid cyst of, was exhibited to the Society. The female from whose body it was taken was sixteen years of age. It had been several years in formation, and hæmorrhage from the bowels took place before death. The cyst was attached to the right side of the liver. Its outer covering was formed of the peritoneal coat of the liver, and within this was a second cyst, which contained three hydatids.

“ In another case a young woman had enlargement of the right side. At length she began to expectorate small hydatids tinged with bile. This expectoration continued for three months, and then she recovered.

“ In another instance small nodules were felt over the hepatic region. They disappeared by purging. It was supposed that

they were hydatids, and had passed by the biliary ducts.

"The question of treatment involved considerations as to the safety of tapping, or of opening the cyst more freely. By some it was thought tapping would hazard great constitutional irritation, and, perhaps, suppuration and sloughing of the sac. When these cysts are near serous cavities, it was considered as, usually, better to let them alone, unless a free exit can be given to them. A case, however, was related of the successful removal of three quarts of colourless fluid from an hydatid cyst by trocar. The patient was greatly relieved for a year and a half. Then came on cough and expectoration, and he died. The liver was changed into irregular clumsy masses, so that with its greatly thickened peritoneum, its natural character could not be discovered. It was converted into two thick cysts, containing very numerous large and small hydatids, the lower cyst was firmly contracted on several dead hydatids, and in the upper cyst there were numerous living hydatids. This upper cyst communicated, by an aperture through the diaphragm, with the right lung, where there was a large abscess containing shrivelled hydatids.

"It was mentioned that spontaneous cure sometimes occurs. The hydatids shrivel up, the cyst contracts, and remains dormant unless inflammation be excited, when the whole cyst may slough. Two fatal instances of this nature were adverted to.

"Could it be ascertained that adhesion had taken place, it was thought it would be safe to open with a scalpel.

"The importance of correct diagnosis was pointed out, and in aid of this it was mentioned, that the specific gravity of the fluid of ascites is to that of hyatids, as 1014 to 1001, and that the fluid of hyatids contains no albumen.

"*Encysted Dropsy*;—the patient, in this case, was tapped, and only a few ounces of fluid drawn off. Some hours afterwards another cyst burst, and seven or eight pints escaped. Four days afterwards symptoms of collapse came on, and the woman died. There were many cysts arising from the peritoneum. The intestines were agglutinated, and the ovaries greatly diseased. The cysts were ascribed to peritonitis.

"*Ascites, with utero-gestation*;—the female

was in the eighth month, and with her eighth child. Fever and delirium came on, and a question arose in consultation, as to the propriety of tapping, or of exciting premature labour. The distressing symptoms had subsided, so that neither had been decided on. It was suggested that tapping was less dangerous before delivery than soon after, and a case of recovery from paracentesis, under such circumstances was referred to. Cases of dropsy disappearing after parturition, were reported.

IV. *Diseases of the Urinary and Genital Organs.*

"*Kidney*;—an instance of a cyst containing five or six quarts of purulent matter, and connected with the left kidney. The structure of the kidney was absorbed, and the ureter was rendered impervious by lymph at its renal extremity. The patient had been tapped under an idea of ascites.

"An instance of strumous ulceration of the right kidney was related; and another in which a quantity of caseous matter was deposited in both kidneys, in connexion with ulceration of the bladder.

"*Diabetes*;—an instance in which the serum of blood drawn from the arm was like fresh milk, containing not only albumen but saccharine matter—showing the constitutional nature of the disease, and its dependance on deteriorated blood. A cataract had formed in both eyes, from deposition of albumen, within the last eight months. A question arose as to the cataracts, whether they were coincident, or dependent on the morbid state of the constitution. The latter opinion preponderated.

"*Bladder*;—retention of urine, an instance of, in a case of concealed pregnancy. The male catheter did not reach the urine. The child's head was ultimately perforated, but the woman died of sloughing of the vagina.

"A case of ulceration of the bladder in a female, æt. 26. The left kidney had become almost absorbed. The urine had been acid and bloody; there had been pain in the loins, and frequent desire of micturition. She died ten days after parturition. It was considered remarkable that, in almost the whole of a considerable number of cases of ulceration of bladder, the left kidney was the one affected.

" **Calculus of the bladder**; an instance of removal by dilating, with rectum bougies, the urethra of a girl, æt. 18. Three weeks' dilatation succeeded, though with much pain. The urine could be retained afterwards. She died eighteen months after, of disease of the kidney. Cases were alluded to in which the urethra had been dilated by mistake, supposing it to be the vagina.

Uterus;—fungus mass at the mouth of. The uterus had become impregnated, and discharges of blood and offensive matter took place. The woman had passed the term of utero-gestation, with entirely broken down powers. Ultimately the membranes were ruptured, and an attempt was made to deliver, but the woman died immediately afterwards. It was urged that premature labour should be induced in such cases, as uterine tumours grow rapidly in the latter months.

" Some cases were mentioned in which tumours of the uterus had become absorbed after delivery; and a question arose as to the process of removal, whether by absorption alone; or by previous softening, as in pulmonary tubercles.

" Case reported in which there had been distressing pressure on the rectum and bladder, yet this distress was removed, and the uterus restored to almost its natural size, by quiescence and the recumbent posture, persevered in during eight months.

" **Abortion and Death of Fœtus in Utero**;—an instance was related in which deaths of the fœtus took place repeatedly in the same female—a lady of spare habit—and was imputed to uterine congestion. On one occasion, and near the completion of the term, the child died, and it, as well as the placenta, was submitted to careful examination. No cause of death could be discovered except the loaded state of vessels.

" A case was mentioned in which the uterine hyperæmia appeared attributable to the lady's anxiety to have a child, and occasioned her repeatedly having still-born children. Tonics till the period of quickening, then venesection and mild mercurials, enabled her to give birth to a living child.

" In another instance, from the immense quantity (between two and three gallons) of liquor amnii, and the shortness of the chord, the child hung in utero, causing great distress to the mother, from the sense of drag-

ging. The child died between the eighth and ninth months. There was considerable ecchymosis at the entrance of the funis into the abdomen.

" **Vagina**;—instance of contraction; in which conception occurred, and a crucial incision was required in parturition.

" **Puerperal Fever**;—circumstances were mentioned as indicating the erratic nature of the inflammation, and as giving an erysipelatous character to the disease. No adhesive matter was formed. It was thought to commence in some local injury, and then to spread itself to other organs, sometimes leaving that in which it originated free from disease.

" **Perineum**;—several instances of injury and operation related. It appeared that they had generally done well, but some cases were reported in which severe effects arose, and proved the necessity for caution even in simple operations.

" **V. Diseases of Blood-vessels.**

" **Aneurism of the Aorta**;—which burst into the right auricle of the heart. Here there had been anasarca, dyspnoea, a livid countenance, and bellows-sound pulsation on the right side of the sternum. Twenty-four hours before death, dyspnoea and other symptoms became exceedingly distressing. There was hypertrophy of the heart with dilatation of the left ventricle, and the ossific deposit on the aorta and its valves. The right auricle adhered to the aorta, and communicated with it by a ruptured opening.

" **Aneurism of the Abdominal Aorta**;—communicating with the vena cava by two openings, having rounded and smooth edges. The man had become anasarcaous, and died suddenly. The lungs were diseased, and there was effusion into both thoracic cavities. Questions arose as to the state of circulation, it being supposed that if much arterial blood passed into the lungs, it would occasion extreme distress of the respiratory function. It did not, however, appear that there had been great distress; and it was suggested that the two columns might balance each other. Had the openings been congenital, it was thought nature would employ all her resources in meeting the exigency. It was

remarked, in the discussion of this interesting case, that sudden death often occurs when aneurisms exist even when no change in them has apparently taken place.

"*Hæmorrhage from mucous tissues under severe accidents* ;—on this was founded the inquiry whether it may be attributed merely to the concussion. Some seamen were in a boat, within two yards of a cannon unexpectedly by them discharged for signal. One of the boat's crew was cast into the water to a distance of ten yards. He was taken out insensible. There was no broken bone, but the head was much swollen, and there was hæmorrhage from the eyes, nose, and ears. Against the opinion of their being the effects of concussion, it was related that an officer had a twenty-four-pound shot pass between his thighs, and tore off part of the coat without his being aware of the occurrence. It also was considered to disprove the assertion that the wind of a cannon-ball is destructive.

"*VI. Diseases and Injuries of Bones.*

"*Fracture of the pelvis and thigh, arm and jaw* ;—in a boy, æt. 17, who fell from a height. He was found in a state of collapse, and discharged urine involuntary. He quite recovered.

"The importance of passing a catheter, in all cases of fractured pelvis, to prevent extravasation of urine, was urged. A question arose as to the state of the brain in injuries producing concussion of the brain and collapse.

"Another case was mentioned. The injury was occasioned by a heavy waggon's passing across the pelvis, chest, and right shoulder. The woman was collapsed and emphysematous. The clavicle, ribs, and ilium, were fractured. Ten weeks afterwards sloughing occurred, and destroyed life. The fractured clavicle and four ribs were found un-united.

"Other cases of fracture of the ilium were mentioned, and it was reported that these injuries usually do well.

"*Fracture of the femur* ;—an instance in a person 108 years of age. The bone united but then the repairing powers failed, and the patient died.

"*Knee joint* ;—cases of extensive injury were mentioned, as showing how much lesion can be sustained if the skin remain entire. The joints were torn open, except the skin

and integuments, and the leg bent on the trochanter—the ligaments, of course, being lacerated: and yet the patients have done well.

"*Sternum* ;—fungoid disease of—the sequel of a case related last year. Not only had part of the bone perished, but there were fungous developments at the ends of the cartilages of the ribs, abscess in the lung, adhesion of the pericardium to the heart, ulcer in the bronchia and hydrothorax.

"Some cases of dislocation of the hip, and some of removal of substances of the knee joint, also occupied the attention of the Society, and brought before it the practice of different public institutions, as well as of private individuals.

"*VII. Materia Medica.*

"*Veratris* ;—some cases in which it failed to give relief, others which it had aggravated, and some in which it had proved beneficial; but the concurrence of testimony was, that its powers had of late been unduly extolled.

"*Colchicum* ;—an extract of the acetate was mentioned as deserving of high commendation; and the powder of the root, in doses of five grains, was reported as an efficient form of the remedy. The addition of quinine had been found available, when either apart had not succeeded.

"*Iodine* was brought under observation as a valuable remedy in secondary syphilis, and in affections of the skin and throat where mercury cannot be used. In one case of two years' standing, the utmost advantage had resulted from one grain of iodine and ten of hydriodate of potash, with sarsa, twice a day, for a month."

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Nouveau Manuel Complet d'Auscultation et de Percussion ; ou Application de l'Acoustique au Diagnostic des Maladies. Par A. Raciborski, D.M.P.

A New Complete Manual of Auscultation and Percussion ; or the Application of Acoustics to the Diagnosis of Diseases. 12mo. pp. 302. Paris. June. 1835.

We have been favoured with an early copy of this very valuable manual, and hasten to lay its contents before our readers.

The author, who is physician at la Charité, and also a professor, was determined to pub-

lish a portable manual of auscultation and to introduce all the improvements made since the time of the great Laennec. He includes all the conclusions of the French and Germans, and Italians, of Dr. Hope, &c.

The author observes:—

“All elementary books, in his opinion, ought to be portable, not only because this form is most commodious, but because a science whose domain is determined, may be reduced to its proper limits.

“In his opinion, also, a manual if intended to be an elementary book, so far from giving a vague or inexact idea of the science of which it treats, ought to give a perfect account of all the facts known on the subject.”

It ought to embrace all the facts, so as to deduce all that are not doubtful, to assign a logical place to each, and to present in the exposition, a filiation of natural ideas, as lucid to the mind as advantageous to the memory.

“Without dismembering the order, we should separate by a judicious analysis, all that is not essential to our object, and the synthesis which we present of all the simplified facts, but not disfigured or mutilated, shews a clear view of each object of analysis.”

It is in works of this kind that we ought to concentrate the same expositions of generalization, and the results of all analysis and details.

The importance of auscultation and percussion is now generally acknowledged. We have no hesitation in avowing that without their aids, we renounce the practice of medicine. There is not a celebrated physician in France who is not familiar with these methods. Other countries, says our author, also recognize the utility of this part of diagnosis.

Auscultation and percussion, already valuable in the hands of Laennec, Avenbrugger, and Corvisart, have become much more advantageous by the labours of MM. Andral, Bouillaud, Louis, Piorry, Reynaud, &c.

“This branch of diagnosis is still further enriched by the discovery of new facts, but these are so dispersed through journals and new works which are not in the possession of every one, and which only benefit a small number. I have thought that a work which would contain all the disquisitions will be useful. If I add some new facts, I hope they will be fairly examined by my

readers. I intend the work for those commencing the study of medicine.”

Our author next gives a concise view of the utility of auscultation and percussion, which is worthy of citation.

“Auscultation and percussion are nothing more than the direct application of the senses to the diagnosis of diseases. These two methods, although distinct, present so many points of contact and analogy in their use and mutual succour, that I have not considered they ought to be treated of isolatedly.

“Auscultation, from the Latin, *auscultatio*, exploration by means of the ear, has for its object, to recognize, by the aid of the ear, the different sounds (*bruits*) which occur during the performance of the functions of the organs of respiration and circulation. Instructed then by the numerous observations based on the general laws of physics, that a bruit observed in an organ coincides with a certain pathological state, we can easily recognise, by aid of auscultation, the seat and nature of affections which modify functional bruits. It is in this way that we know by the results of experience, the *crepitating* râle indicates a pneumonia of the first degree, or an alteration in the pulmonary vesicles, and the *sibilous* râle denotes the existence of a catarrh, or an alteration seated in the bronchiæ.

“Percussion consists in shocks executed principally by means of the fingers on the surface of different regions of the body; it causes them to give different sounds, according to the different nature and state of their organs.

“It is exercised on a greater field than auscultation. This is only applied to regions which produce spontaneous bruits; while the first may be practised on all the surface of the body, but principally upon the parietes of the great cavities of the trunk.

“When we find a dull sound in a region which in a normal state gives a clear one, this abnormal sign indicates that the organ corresponding to the percussed region is seized with a morbid affection.

“It will be easy to recognize to which of the different organs this state belongs, by a knowledge of its respective position; and percussion becomes a valuable means of determining, in a precise manner, the variations,

whether of situation or volume, which organs undergo.

"Thus we know that the part of the hypochondriac region, situated under the borders of the false ribs on the right side, gives on percussion a clear sound in a healthful state. If, then, this part renders a dull sound, an affection is revealed to us.

"If this dull sound is prolonged towards the liver, we say that this organ is hypertrophied.

"If this dulness descends without interruption to the region of the right ovary, we know that it depends on a tumour formed in this last organ*."

If auscultation and percussion had no other result than that of contributing to enlarge our knowledge on the nature of the affections of the respiratory organs, and of shewing these affections in a new and true light, their value would be inappreciable.

In fact, before the perfection of the different modes of percussion, and of the discovery of auscultation, what inaccuracy prevailed in the diagnosis of the respiratory organs!

When intestinal gases were evolved in great quantity and pressed the diaphragm against the lungs, so as to impede them in the performance of their function, dyspnoea resulted, which was ascribed to a lesion of the lungs, under the name of peripneumony and of pleurisy.

At other times an organic lesion of the heart gave rise to dyspnoea; and there was no hesitation in attributing this affection to some disease in the lungs, or of their nerves.

Again, when dyspnoea and sanguinolent sputa were the principal characters of pneumonia, the true affections of the lungs were unknown, and ascribed to morbid states that did not exist.

Thus, in inflammation of the lungs in aged persons, unaccompanied by expectoration, but only with prostration of the vital powers, common to all the serious diseases that afflict them, it was supposed that an adynamic fever existed when these persons were affected with pneumonia. Such was the state

of medicine about the end of the last century, and even at the commencement of the present. Thus, what Stoll described under the name of peripneumony or bilious pleurisy, was nothing, as Pinel has since remarked with reason, but a gastric derangement complicated with bronchitis, and we can find even in the clinic of Pinel himself, many cases of adynamic fevers, which to us, were true inflammations of the lungs.

The prognosis could not be better established than the diagnosis, the defect in the positive indications on the nature of the disease, though they observed all the changes in its progress, the pulse, urine, alvine evacuations, with a view of prognosticating the termination; the ulterior signs so incomplete, so variable, and so inconstant, could not supply a correct diagnosis, and could not free the prognosis from incalculable effects of inexactitude and error. As our art possesses at present the means of positive diagnosis, and which accords with the determined sciences, the prognosis reposes essentially on the diagnosis, of which it is only the interpretation. When this is once established, nothing is more easy than to prognosticate the intensity of the affection, and the importance of the affected organs.

Thus, to give an example of the simplicity of prognosis as regards the respiratory organs, from two patients, the one affected with the first degree of a slight pneumonia, and the other with an entire lung hepatized, the latter is a much more dangerous disease than the former.

Behold a simple prognosis, and one evident to every body, or the interpretation of a correct diagnosis. Thus auscultation and percussion are equally valuable to diagnosis and prognosis.

The same difficulties and errors which we have mentioned in the diagnosis and prognosis of diseases of the lungs, are necessarily encountered in their treatment, and thence the most frightful and irreparable consequences—the imminent danger of abscesses and inefficient treatment.

In the pneumonias, mistaken for adynamic fevers, we commence by exhibiting stimulants to the patients (camphor, serpentaria, acetate of ammonia, &c.); stimulants, which in place of removing the intensity of diseases,

* Other tumours may exist in this region, which are not ovarian.

only hasten death, whilst a bleeding, acting against the morbid state, would diminish its powers.

On the other hand, the absence of positive signs to establish the indications of treatment, the progress of disease, or its amelioration; signs which cannot differ from those which have been necessary, and which have been wanting for the diagnosis. The ulterior absence of positive signs, complicates, in an extraordinary degree, the difficulties of treatment; it does not even leave to the practitioner the resource of the expectant method, whilst auscultation and percussion come to our aid, whether to change an injudicious treatment, or adopt a judicious one.

How often do we see patients who seem to have no chest affection, scarcely any cough or expectoration, who are nevertheless affected with serious disease. If such patients are allowed even ordinary diet, or commit any excess, the morbid condition is increased, and instead of being extinguished, becomes chronic, and is not arrested but by the tomb.

We have seen more than once, in the practice of M. Bouillaud, at la Charité, patients affected by pneumonia, who were bled and supposed to be cured; but who began to spit blood, and were again seized with cough, and difficulty of respiration.

Such is the cause of phthisis in most cases, which is the result of chronic inflammation of the lungs or bronchiæ, badly treated or imperfectly cured, for want of the use of auscultation and percussion. These expose the slightest traces of the pathological condition, and direct the practitioner to combat the disease with the same means which he employed at the moment of its invasion.

Let us now examine the results of these discoveries, relative to the diseases of the heart. It is to percussion and auscultation, united to the researches of modern anatomopathologists, is to be ascribed the analysis of the different affections formerly comprised under the general name of asthma. At present we distinguish in asthma, sometimes lesions of the heart, sometimes of the pericardium, sometimes of the pleura, and sometimes of the lung. It is by these two methods that M. Bouillaud has recognised different lesions in the centre of the circulation, which were

called, at other times, passive and active aneurisms (Corvisart).

These advances are not illusory; they do not at all augment the number of diseases of the human race, but they very much influence their treatment. It is not correct to suppose that it is of little consequence to distinguish the different diseases of the heart, or that all are to be treated alike. In fact there are some which require instead of depletions, the use of iron and quinine.

It is by auscultation that M. Bouillaud has discovered a particular sound, named by him *bruit de diable*, and previously observed in many arteries by Laennec, and which constantly exists in the carotids of chlorotics.

This sign accompanies chlorosis and anemia, and is valuable in medical practice.

Do not the abdominal complaints also find in percussion a valuable mode of exploration?

How often have pains in the epigastrium been mistaken for the signs of gastritis, until percussion discovered the seat in the left lobe of the liver?

How often have effusions into the right side of the chest been mistaken for hypertrophies of the liver, until explained by percussion?

In fine, one of the happiest applications of this last method of diagnosis, is that which is made in pregnancy. We know that the movements of the foetus, regarded as the most certain sign of pregnancy, may sometimes be wanting; and that at other times hysterical women have supposed they felt such when they were not pregnant. Auscultation enables us to detect two sounds, the beatings of the foetal heart, and of the placenta, so that we cannot fall into error.

Surgery has also derived advantages from auscultation. We hear much better the crepitation of fractures, by placing the ear near the injured limb, than at a distance.

In the same way, by placing the ear over the hypogastrium, we more distinctly ascertain the presence of stone in the bladder, than by the shock given to the sound.

We cannot conclude these general remarks without observing, that the physician, surgeon, and general practitioner, has gained much by the introduction of auscultation and percussion.

A Formulary for the Preparation and Medical Administration of Certain New Remedies, translated from the French of M. Magendie, with Annotations and Additional Articles. By J. M. Gully, M.D.

THIS Formulary has become a species of supplemental codex to the French, and Pharmacopœia to the English medical world. The translator appears to view it in the latter light when he says in the preface that "in beholding the parliamentary pace of our British Pharmacopœias in the official recognition and adoption of the numerous and active remedies which the chemists of France are continually sending forth, and her physicians assiduously making application of in disease, he sees every reason why such a publication as the present should be necessary to, and approved of by, the laudably curious and inquiring medical man." To this sentiment we entirely subscribe, and therefore cordially thank Dr. Gully for undertaking to reduce this, the eighth French edition, into English.

The present differs from the former editions in containing more modern and accurate chemical analyses of the substances treated of, additional data accumulated by the author since 1830, and in the announcement of several new remedies the medical application of which, dates since that period. Among the latter we notice Narceine and Meconine, Codeine, Labadilline, Veratrin, Hydrocyanic ether, the Iodurets of barium and arsenic, Bromine, Chlorine, Mannite, Salicine, Lactic acid, and the Volatile oil of the black mustard-seed. On these individually we do not pretend to dwell, but we recommend the perusal of their properties and modes of application to all practical men. Codeine more particularly appears to have been a most valuable remedy in M. Magendie's hands; and from his remarks on the volatile oil of black-mustard seed, we should imagine it invaluable in cases where a rapid counter-irritation was desired, in cramp, and gouty stomach, for instance.

Under the head of Additional Articles, the translator has given the chemical and medicinal histories of Creosote, introduced by M. Reichenbach de Blansko, and of the Ioduret and Hydriodate of iron, recommended by Pierquin and Andral, in France, and Dr. A. T. Thom-

son, in Britain. These articles are rendered exceedingly interesting—that on Creosote particularly—by Dr. Gully. Nor are the annotations appended to many of the articles of the original text, without point and practical utility.

In short, we consider the introduction of this Formulary a happy and even necessary proceeding, and looking to the entire absence of any work that includes the preparation, effects, and applications of the powerful remedies therein treated of, we hold it as certain, that the English medical world in general will appreciate and patronize it accordingly.

*The London Medical
AND
Surgical Journal.*

Saturday, June 6th, 1835.

CONTINENTAL OPINIONS ON THE STATE
OF SURGICAL SCIENCE IN OUR HOSPITALS.

It is commonly asserted by those who have the surgical care of our hospitals, that the strictures on the manner in which they perform their office, and of their capabilities of doing it at all, are ever the result either of personal dislike, splenetic envy, or an uncontrollable propensity to deviate from the truth. Now, however easy it may be for *us* and others to find fault, it is much easier for *them* to make such assertions—ininitely easier than to combat our accusations, by advancing contrary instances. A pickpocket, though detected in the very enactment of his calling, drops his prey, gives his accuser the lie, and defies him to prove that his hand was ever in his pocket; "if your handkerchief dropped on the ground," quoth he, "it is no fault of mine; you are likely enough to fix on the man nearest to you." For the outrage on common honesty in this instance, substitute that on common sense in the instance of our hospital surgeons, and the relative positions of those who

think as we do, and of the worthies in question, may be understood. Say the latter to us, "Somebody outrages your common sense as regards the conduct of the surgical practice of the hospitals, and you turn round upon us, because we happen to be the nearest on whom you can vent your ire; it is more probable that you tell a lie, than that we are deficient in capabilities—more probable that you had no common sense than that we outrage it."

Suppose we were willing to allow the validity of, this pickpocket defence; suppose we allow ourselves to be only of frail flesh, and they of infallible essence, and that mere spleen, and a longing for all that makes office dear, *does* actuate us in advancing our accusations—what then should actuate an individual to the very same proceeding, who can by possibility have no hope, can entertain no expectation—be things as they are continued, or be they changed—of ever moving one step towards the eminence from which these infallible essences "look down upon us little men?" Surely, one would say, *he* has seen, and has good proof of what he advances: grown men are seldom mischievous for mischief's sake: if not interest, truth must be their motive for making and using rods. Such an individual we beg to introduce to the notice of our readers, in M. Baumes of Lyons, himself the *chirurgien en chef* of one of the hospitals of that city, and not likely, therefore, to cast any sheep's eyes at those of our city. In an article in the *Gazette Medicale*, of the 16th of May, he commences what he terms a "coup d'œil sur les hopitaux de Londres:" and in the number of the same journal for the 23rd, he continues the same subject, with more particular reference, however, to the literary merits of our hospital surgeons; to this portion of the remarks we shall not at present advert, but we call attention to the opinion expressed regarding the practical powers displayed in the hospital

surgery of the metropolis. After recalling the tableau made by M. Roux twenty years ago of the state of surgical science in England, a picture drawn from nature—for our naturals and flats were unconsciously sitting for it.—M. Baumes proceeds to say: "If we seek to learn the mode of proceeding at the present time in the London hospitals, and compare the results with those traced in M. Roux's account, it will be easily observed that the art, as regards operations, has undergone scarcely any change; that it has in no way been enriched by the addition of the discoveries made in other countries; and that as regards the internal, the non-medical treatment of surgical diseases, not one step has been taken out of the apparently immutable track of English therapeutics." The writer then particularises, by quoting from Sir. A. Cooper's lectures, edition 1835, the modes therein laid down for combatting irritation, which includes "mercury to act on the liver, saline purgatives to act on the intestines, and antimonials to act on the skin," as also for the calming of the irritation of the nervous system, "opium and antimony, or rather opium, antimony, and calomel, to act at once on the skin, the liver, and nervous system." Of course this sort of treatment puts out of sight the possibility of any one point being the starting place of irritation to others.

But M. Baumes adds, that "he has seen different kinds of articular tumours, white swelling for instance, increase and aggravated with rapidity, ultimately rendering an operation necessary, when a rational treatment might have superseded it." . . . "Thus any one who has observed their practice for a given time, may readily remark that amputation is frequently had recourse to, in cases that in France, and other countries, would assuredly be cured by following the more rational means of pathological physiology."

Again, to shew how "the operation"

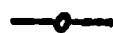
is alway uppermost in the mind of your conceited hospital surgeon, how much rather he makes a case an opportunity for the display of his operative powers, than of his conservative capabilities, it is only necessary to say that when M. Baumes observed the ill-placed treatments of these articular inflammations to several of those who treated them, the answer he got was that "if they put off the operation too long a time, that is if strong febrile symptoms supervened, the operation did not succeed;" whereas the very fever they feared themselves, originated with their calomel, their iron, antimony, and similar irritants ordered at a risk during one of their flying visits. "I have seen," says the writer in another place, "in several hospitals, patients affected with articular tumours, with caries of the bone, fistula, abscess &c. to whom amputation was proposed; and in the meantime, under pretext that a great degree of debility existed, wine, tonics and various cordials were freely administered, although it was at the same time evident that there was extreme irritation of the gastric organs, in great part consequent on the evacuant, aperient, mercurial and other treatment that had been employed for the purpose of getting rid of a complaint which they had thereby increased."

Here there are some nuts for our pure surgeons to crack; the writer does not get his information second-hand: what he relates he has witnessed "in the practice of the first surgeons in London"—*first surgeons!!*

Mr. Lawrence he mentions as an honourable exception to the general rule of ignorance and darkness in the progress of surgical science. "I can affirm," he says, "that I have seen him arrest a violent peritonitis, consequent on the operation for strangulated hernia in as short time as any French surgeon that has been accustomed to the rational therapeutical treatment of such affections, and this by his vigorous

antiphlogistic remedies. *Had the patient been in any other hospital, I do not think he would have escaped death.*"

In our next we shall give the same writer's remarks on the literary merits of our hospital surgeons; meantime we wish them all joy of his estimate of their therapeutical acumen and *operative* alacrity.



ON THE DISEASES OF THE GENITO-URINARY ORGANS.

THE diseases of the urethra are not only formidable in themselves, but they induce others which are most destructive to human life. Although the medical sciences have recently made the most rapid advances in this country, there is not as yet a complete treatise in our language on the diseases of the genito-urinary system. Many instructive works and essays have been published on some of these diseases, but no British author with whose work I am acquainted, has described the whole of them.

It is my object to give a full account of urinary and genito-diseases, and to commence with those of the urethra, as these are most commonly met with; and the whole urinary system comprehends disorganizations which are the prolific causes not only of the numerous diseases of the genito-urinary organs, but of many of the most fatal of the cerebro-spinal, circulatory, respiratory, digestive, and muscular systems. It would, however, be utterly impossible in an essay of this kind, to describe the numerous diseases in the different organs, to which urethral disorganization gives origin; and I shall therefore confine my descriptions to those that strictly belong to the urinary apparatus alone.

As great diversity of opinion exists with respect to the removal of urethral diseases, it appears to me that a concise description of the anatomy and pathology of the urethra should precede that of the treatment. I shall therefore adopt the following arrangement in this essay; 1st. The anatomy of the urethra; 2d. The pathology; and 3rd. the treatment of its diseases.

Anatomy of the Urethra.—The urethra is the excretory canal of the urine in both sexes; of the prostatic fluid and semen in man.

In man it extends from the neck of the bladder to the extremity of the virile member, passing above the inferior extremity of the rectum, under the symphysis pubis, behind the corpora cavernosa, and glans penis.

In the male subject the direction of the urethra is compared to that of the letter S, when the penis is relaxed, or when the rectum and bladder are filled with air. Br

M. Ammussat has clearly demonstrated that when the penis is elevated on the abdomen, there is but one curve, which almost entirely disappears on expelling the air, and that if there, the organ is carried before and upwards, that is to say, in an intermediate position to the two preceding, the canal becomes straight or almost so, directed obliquely from before backwards, and from above downwards. The facility with which straight lithotritic instruments are introduced into the bladder, confirms the truth of the statement that the urethra is nearly straight. The length of the urethra has been variously estimated by different writers. Whately, after a careful examination of forty-eight subjects states, that the length varies from $7\frac{1}{2}$ to $9\frac{1}{2}$ inches; Lisfranc from 9 to 10, and in one case of a negro 11; but it is usually estimated from 9 to 12 inches in European subjects, and still higher in negroes. Its diameter also varies in different parts, being about four lines wide in the greater part of its extent, and from two and a half to three at its orifice. Such is the estimate of Sir Everard Home, which is held to be too small by Lisfranc, and too great by Phillips; but the experiments hitherto made are too few in number to determine the point.

The average length of the urethra is about 9 inches, the prostatic portion occupying $\frac{1}{4}$ of an inch, the membranous, about $1\frac{1}{4}$ inch, the remaining spongy portion about 7 inches.

There are usually three dilatations of the urethra, one at the prostatic portion, another at the bulb, and a third behind the fossa navicularis; and there are generally three contractors, one at the orifice, which is about 1-5th of an inch in diameter, another at the membranous portion, about 1-4th of an inch, and a third outside the bladder at its orifice.

Anatomists divide the urethra into three portions, the prostatic, the membranous, and the spongy; some add a fourth, the bulbous; but this is generally considered a part of the spongy.

The portion which is continuous with the neck of the bladder, is the prostatic.

The space between the margin of the prostate and the bulb, is the membranous, and the remaining portion to the glans penis is the spongy. The bulbous portion is included in this division:—

1st. The prostatic portion (*pars prostatica*) is so called from its being surrounded by the prostate gland; it has the form of a cone, the base of which is turned backwards, the apex forwards; its length has been variously estimated. Bayer considers it from 15 to 18 lines; Ducamp from 12 to 15; Lisfranc from 8 to 11; but the general opinion is, that it is from 12 to 15 lines in length. It is larger in the middle than at its extremities, its parietes are thin, except when in connexion with the prostate, where they are thick and solid.

This portion of the urethra is surrounded by the prostate in its inferior three-fourths; the superior fourth being close to the arch of the pubis, and is frequently enveloped by muscular fibres. This part of the canal may be entirely surrounded by the prostate, when that organ is diseased. It is situated before the interior extremity of the rectum, about an inch from the anus in the adult, above and behind the small curve of the rectum, to which it is intimately united by cellular tissue, traversed by many blood-vessels and by the recto-vesical aponeurosis, which also connect it with the *vesiculæ seminales*. Above and upon the sides it is situated behind the arch of the pubis under the surface of the triangular ligament of the symphysis. It is attached to the ami of the pubis by the anterior ligaments of the bladder, which are the internal portion of the attachment of the recto-vesical aponeuroses. Above this portion of the urethra there are large veins and loose cellular tissue interposed between the bladder and nymphysis, and in this situation the oblique direction of the bladder forming a triangular space, circumscribed inferiorly by the prostate, anteriorly by the nymphysis, and posteriorly by the bladder. The prostate portion anteriorly, and on its sides is round, and it is united inferiorly to the *vesiculæ seminales* by an aponeurotic band. It is thin and insensibly confounded anteriorly with the commencement of the membranous portion. On the sides it is connected with a portion of the levator ani muscles. A great number of varicose veins surround it more, especially between the bladder and rectum; in old persons M. Ammussat has discovered that it is liable to numerous changes of position, in consequence of the length of the fibrous attachments and the mobility of the anterior part of the rectum with which it is connected, the direction will therefore be modified according to the fulness or emptiness of the rectum. When the intestine is empty it is directed obliquely from below upwards, and from behind forwards; when it is full, the direction is the reverse. In the middle of the floor or inferior surface of this urethra a narrow ridge projects from seven to nine lines in length, formed by an elevation of the lining membrane and subjacent cellular tissues, extending from the neck of the bladder where it is largest almost to the extremity of the prostate where it is pointed; and this is denominated by anatomists, the *caput gallinæ* or *verumontanum*. In the middle of its anterior part is an oblong narrow depression, designated the *sinus pocularis*, within the margins of which, the orifices of the two seminal ducts (*ducti ejaculatores*) are situated, one being on each side. On the outer side of this ridge there is a depression called the *sinus prostaticus* which is pierced by eight or ten excretory canals of the prostate, through which a viscid fluid exudes on compression. There also occasionally exist

two culs de sac on the verumontanum, which arrests the progress of instruments. Lisfranc has found a depression between the two lobes of the prostate, the antero-posterior diameter of which is two lines, the transverse 1 line, and the depth $1\frac{1}{2}$ line. This depression is rare, and is generally discovered at the right side of the verumontanum when this is deformed and inclined to the left. A catheter or sound may readily pass into these cavities, and we should bear them in recollection. Posterior to the verumontanum is a transverse projection which establishes the line of demarcation between the bladder and urethra, and these two elevations unite at a right angle, dividing the commencement of the canal on its under surface into two lateral depressions, in which instruments are more frequently arrested than in the lacunæ on the verumontanum. The superior surface of this part of the urethra is uniform, and offers no obstruction except at the point where it corresponds to the triangular ligament.

2nd. The membranous portion (*pars membranosa*) extends from the margin of the prostate to the bulb; its length is differently stated, by Boyer at 12 lines; by Ducamp at 9 or 10; by Lisfranc from 7 to 11; and by Quain from 10 to 12. It is composed of the proper membranes of the urethra only, its extent superiorly being about an inch, and inferiorly about 4 or 5 long; it is the narrowest part of the canal, and is covered by fibres from the deep perineal fascia, which is continued backwards around it and the prostate, and is supported by the terminal expansion of Wilson's muscles. It is of a cylindrical form, is situated precisely under the nymphysis pubis, and at the junction of the corpora cavernosa. Its muscle is named that of Wilson, which attaches it to the anterior ligament of the bladder, and to a dense cellular substance, as well as the triangular ligament of the nymphysis, at the space of the corpora cavernosa. Its connexion with these parts is closer when the virile member is raised towards the abdomen; it is in immediate connexion, inferiorly, with Cowper's glands and the acceleratores urinæ, laterally with its muscles, and with vessels and nerves which it derives from the corpora cavernosa, and superior to it is the triangular ligament of the urethræ. It is oblique from behind forwards, and from below upwards, similar to the urethra of the female, which it resembles in length, form, and direction: it changes its course according to the condition of the rectum and penis. It is much stronger than is generally supposed, as the muscle of Wilson surrounds and strengthens it, serves to elevate and compress it, contains a great number of vessels between its fibres, and presents itself before Cowper's glands: under this muscle the urethra possesses the same organization as the bladder; its fibres are longitudinal and circular, and

these are intermixed with each other. It would, in fact, be more correct to call it the muscular than the membranous portion, as this last term conveys false ideas, considering its force and resistance. It is sometimes pierced by the beak of the sound or catheter. It is this portion of the urethra that is incised on the operation for lithotomy, and in that for retention of urine through the perinæum. In the membranous portion, in its course from the prostate to the bulb, there is a curve, the convexity of which is towards the pubis. This curve frequently prevents the passage of an instrument towards the bladder, but the difficulty will be overcome by the surgeon elevating the penis to an angle of 45° , at the same time drawing it forwards, or by passing a finger into the rectum, and directing the instrument into the bladder. At the anterior extremity of this portion is the bulb, or commencement of the spongy portion.

The bulb is very distinct posteriorly, where it projects under the canal, but it offers no line of demarcation, and anteriorly is insensibly continuous with the spongy portion of which it forms a part. It is situated in front of the inferior extremity of the rectum, to which it is attached by dense cellular tissue; and, above all, by the sphincter ani. It is situated above the acceleratores urinæ, so that it can be felt across the perinæum by the finger. It corresponds superiorly to Cowper's glands, and to the termination of the membranous portion; still higher are the triangular ligament of the nymphysis, and the junction of the corpora cavernosa on its sides; it is immediately enveloped by the acceleratores urinæ, and by the roots of the corpora cavernosa; on its superior part there is a groove which receives the urethra, properly so called; this groove is continued anteriorly, with a canal formed by a spongy tissue, which envelopes the mucous membrane; posteriorly it presents at its origin a cul de sac, circumscribed by a band formed by a fold of the fibrous membrane which surrounds the spongy tissue.

3. The spongy portion (*pars spongiosa*) is more anterior and more extended, commences at the bulb without a line of demarcation, and terminates at the glans penis. The urethra frequently enlarges after the commencement of the bulb, especially on its inferior surface, and forms a sinus, supposed to be a reservoir for the semen and urine, which obliges the surgeon, in passing a catheter, to raise its point so as to ensure the sweep of it into the bladder. The length of the membranous portion is estimated by some at six or seven inches, by others at eight or ten. This part of the urethra is uniform in size, being intermediate in diameter, between the membranous and bulbous portion; but it dilates in the glands, forming a cavity called the fossa navicularis, and then narrows at the orifice of the urethra. The spongy portion is embraced by

the corpora cavernosa, which present a groove for its reception, and with these it is firmly united by a very dense cellular tissue and by blood-vessels. It is covered inferiorly and almost posteriorly by the acceleratores urinæ, and anteriorly by the skin alone. It presents in its middle a sort of induration when the penis is in a state of flaccidity.

(To be continued).

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Hospital Reports.

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NORTH LONDON HOSPITAL.

Quartan Fever with Scabies—Large doses of Quinine.

FRANCIS HAYES, labourer, aged 39, was admitted March 6th, under the care of Dr. Elliotson. Five months ago he was working for six or seven weeks in wet and marshy land near Rye, in Sussex, and at the end of that period was taken with all the symptoms of ague. At the first or second fit, he took a pint of pure brandy for the purpose of "bringing up the ague cake." Instead of this being attended with benefit, it very much increased the subsequent hot stage, and produced great head-ache and delirium. He afterwards took three pints of decoction of oak bark between the fits, daily. It was attended with no perceptible effect. On the advice of a friend he now got drunk when the fit came on, with ale. This also seemed as little effective as the oak bark, but did not increase the hot stage. He worked five or six days after the disease began, but did not see a medical man for about a month. When he did apply for relief, twelve small pills were given him; they were bitter, but did him no good. This was the last medicine he took. His symptoms on admission were, no pain in chest or abdomen, pulse 78, soft and weak; respiration natural except during the fit; bowels open. He has an eruption, which appeared eight days since, over the whole surface but the face.

Sulph. Quinine, gr. x; hora unamante paroxysm, sumendæ et rept. 8vo. hor.

It is worthy of remark that the paroxysm commenced at eight A.M. not as it usually does in the after part of the day.

7th. Paroxysm came on half an hour earlier, less severe than usual, lasting about an hour.

Mag. Sulphuris, ʒj; fricand per horam unam bis die.

10th. Paroxysm returned this morning, the cold stage was unattended with rigors. Slight pain in epigastrium, attributed to quinine. Cupped to ʒvj., in the region affected.

11th. Pain in epigastrium gone, eruption disappearing.

13th. Paroxysm very slight, cold stage

lasting only half an hour. The eruption to-day very irritable, and more defined on the chest.

22d. On the expected day no return of the paroxysm.

24th. Distressing head-ache, pain in epigastrium. Omit quinine.

27th. Head-ache gone, fluttering coldness in extremities and abdomen.

April 1st. Coldness gone, eruption dying away.

7th. Discharged, cured of both diseases.

Dr. Elliotson remarked of this case, that it is worthy of being remembered, as illustrating the fact of two specific diseases going on in the system, at one time, with the application of two specific remedies. The large doses of quinine were attended with no ill consequences, except on one or two occasions a pain in the epigastrium, which was removed by the abstraction of a small quantity of blood; had he discontinued the quinine it is probable the disease would have been protracted. He thought in severe cases like the present, large doses of quinine should be used; it was erroneous to suppose that you could always fix the dose of any medicine.

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PARISIAN ANATOMICAL SOCIETY.

Encystment of the Liver.—One of the most curious alterations exhibited, is the conversion of the organ into a compact yellow mass more than thrice the ordinary volume of the liver, and throughout the substance of which, non-encysted points of a tissue that is evidently erectile were found. The encysted condition of the liver, either partial or general, is one of the most frequent changes that have been exhibited to the Society, and opportunities have presented of observing it in all its shades, from granular encystment in which each grain appears to have its own cyst, to the lobular encystment, or subdivision of the liver by fibrous bands which isolate variously sized lobules and give the whole organ the embossed appearance so usual in scirrhus. In one case you may have remarked the great thickness of the fibrous lamellæ that thus formed the partition of the hepatic tissue. You have also seen the general encystment of the organ in a case of ascites, in which the liver turned upon itself and, enveloped in very thick false membranes, seems to have been condensed by some powerful pressure. In all the cases of encystment, partial or general, you could not fail to remark the general or partial atrophy of the organ, as well as the alteration of the tissue.

To what is this singular tendency of the liver to encystment to be attributed? Is it owing to its anatomical texture or to the specific nature of its diseases? The fibrous septa are the result either of some new production or the consequence of an atrophy of

the glandular grains, or lobules, whose disappearance would allow the fibrous lamellæ, previously separate, to join each other; or lastly, they may be a consequence of the presence of the specific membrane, to which the name of Glisson's capsule is applied.

A rare and curious alteration of the liver was presented by M. Cezalia. It had a compactness, colour, and fracture, resembling those of yellow wax.

M. Stenski exhibited a scirrhus of the liver, with dilatation of the vena portæ.—*Archives Generales, April.*

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VIREY ON THE GENERATION OF PLANTS AND ANIMALS.

(Continued from p. 239).

Alterations in the Reproductive Functions—Of Monstrosities, and Mixtures of Races.

EVERY one knows how much parents influence the product of generation. The vital power, for example, the duration of life, the temperament, form, degenerescences, and numerous other diseases, are hereditary. These are the vicious contrarieties of the power of life. The Jews and Mussulmans are circumcised for ages; but their progeny are born with a prepuce. Frogs and salamanders engender tadpoles with projections which they do not possess. The diseases which are transmitted by generation are the constitutional affections of the body, and not local diseases; a deaf, blind, hump-backed, or deformed individual rarely communicates his infirmity to his descendants; but epileptics, hypochondriacs, the gouty or calculous (those labouring under gravel or stone) perpetuate their diseases to their families. It is also the same as to the strong or feeble constitution of parents. Animals born of aged parents are feeble and languid, because they received a life enfeebled and exhausted. We rarely observe these facts in vegetables. There is also a resemblance between infants and parents, in their temperaments and hereditary characters, but these resemblances are most marked in proportion as love and the vigour of the generative power have been more considerable; and as the inferior animals follow nature better than men, their productions are more like themselves than infants are their parents. In fact, man and woman do not

copulate, too frequently, without exciting nature, and abusing their powers; they too frequently think of satisfying their desires than of producing sound and robust infants, so that the object of nature is neglected for pleasure. It is not, then, astonishing that they often form vicious and disfigured productions; besides, the irregularities of life, the passions, effeminacy, feebleness, diseases of pregnancy, have great influence on the offspring. Domestic animals, which enjoy a kind of life so opposed to the natural state, are equally subject to irregularities in generation. Monsters or monstrosities are more common, for this reason, in the human species and in domestic animals, than among the species which live according to the laws of nature. The weakness of the seeds, the effects of the abuse of amorous pleasures, cause imperfect infants, false germs, as moles or false conceptions, which are irregular fleshy masses, ordinarily containing the rudiments of the organs and limbs, which remain in the womb for a long time and harden. In fact, nature cannot engender more than imperfect infants, on account of want of time sufficient for the elaboration of the seeds; she endeavours, nevertheless, to perfect them, to give them life, and employs a longer time than in ordinary pregnancies, for moles have continued during the whole life of the woman who conceived them. Females who have borne moles or monstrosities sometimes preserve the power to reproduce them, by a habitude which their organs have contracted. Individuals who fear dishonour, which does not always defend them from seduction, produce moles; or, when chagrin and the secret desire to abort enfeeble the effect of impregnation.

There are many kinds of monsters where the organs are in excess, as infants with two heads, four arms, &c., or where the organs

the act of reproduction, and some are indifferent to the result, or have their minds occupied with other individuals, or other matters. It cannot be expected, under such circumstances, that there will be a marked parental resemblance. A friend of mine assured me, that, during coition, having fixed his imagination on a lady whom he once loved, that his child was a female, and remarkably like the individual on whom his imagination was fixed.—Ed.

* Few, perhaps, are entirely absorbed in

are defective, as infants without legs, arms, &c., or where there is a transposition of organs, or by alterations of forms. When two embryos are developed at the same time in the womb, they may grow together or be partially or wholly united; they may be, moreover, less imperfect; and the same thing is observed in eggs containing two yolks which produce chickens with double feet, &c.; and the same is seen in vegetables and animals which have several young ones, and these are more liable to have monsters than those that bring forth but one little one.

M. Virey is of opinion that tight lacing and strong passions contribute to the deformities of infants. Peasants who are robust generally engender well-formed infants, because they follow nature more closely than the delicate women of large cities. In proportion as we deviate from nature, we obtain products less natural and more deformed.

In the ages of superstition, the birth of a monstrous infant was considered a proof of sexual connexion with an evil spirit, or a sign of celestial vengeance, and the burning of the mother could alone expiate so great a crime in the eyes of the people.

It is from the venereal harmony and voluntary intercourse of the sexes that a good conformation of individuals results; for these enjoyments denied by the heart, these pleasures influenced by fear or violence, are sterile, or do not produce but deformed beings who bear the imprint of the hatred and discord of those who engendered them. Such are sometimes the adulterous mixtures of different species of animals, because such unions are not commanded by nature. The resemblance of infants to their parents equally depends on the concordance of the seeds and on the activity of their parts, which preserve their original type; but the defect of the energy of the seeds produces degenerate individuals, and these scarcely preserve any traits of their parents. Thus it is that domestic animals have less vigour than their savage species; they engender varieties, as we often see dogs, birds, &c., which races differ from the originals, both in colour, proportion, stature, and also most partial monstrosities. Animals which bring several young ones at one birth have great

varieties, while the uniparous, or those that have one at a birth, has it more perfect, as the elephant, mare, &c., whose offspring is seldom monstrous; but the multiparous species, as bitches, cats, &c., give birth to many varieties, which is caused by nature having to form many instead of one individual, and therefore she can give less perfection to many than to one.

When there are two or more infants in the uterus, they are less developed than when there is but one; when three or four in number they compress each other, so as to cause deformities. Women who bring forth monstrosities are less sound and vigorous than those who have well-formed infants.

We may refer to a similar disparity of action on deformed productions born of seeds unequal in vigour; for the sperm of those who are in the flower of youth is very different from that of old persons. When two individuals of different ages copulate, there is scarcely any harmony of love, and it is on this account that conception either does not happen, or they engender imperfect infants or monstrosities. The seeds which are best fitted for perfect generation are those of the same ages, and those who aspire more to be united; for the sperm of an old man renders old a young female organ, in the same manner that a young man fades with an aged woman; so that Love never retrogrades, and he wishes to unite to a young in preference to an aged woman.

In crossing the breeds of animals we obtain individuals much more robust, we improve the species, and augment the number of males; which always indicates a much greater vigour in the generative power. Among dioic plants, such as hemp, male individuals are, in general, less numerous than females, as we have already remarked.

The sexes engender the different sexes according to the inequality of power in their seeds; for when the male seed dominates it engenders male individuals; and females are engendered by an excess of power in the female seed, or in the germ, or the egg (ovum) in the ovary, which produces it. When the seeds are equal in vigour, one could not surmount the other, according to Empedocles, and individuals of both sexes, androgynes or hermaphrodites, which are incapable of engendering, result.

The sexual organs of animals and plants contain in their ovaries the germs of the new beings, but these cannot be vivified or developed before the males communicate a part of themselves, whilst the females furnish a portion also. The womb and the ovary of every animal and plant is endowed with a special vitality, especially at the epoch of generation; it has a separate existence—its desires, wants, appetites; it is an individual within an individual; it influences and governs the whole of the living being. The womb and its dependences, in the female, are, as Plato said, a species of living animal, which has its caprices, its affections, its pleasures, which governs the whole body, which extends its influence over all parts, so that it may be considered the root of the female—her original vital trunk. When the womb is impregnated by the male it influences every part of the body; the flesh is impregnated, which is easily discovered in the goat, the sheep, the heifer, &c., whose flesh has an unpleasant and peculiar flavour at the time of fecundation. So, also, has the flesh of the male at the season of reproduction. The odour of flowers correspond to that of the genital organs of animals during the rutting season. The nausea and the vomitings, changes of colour, and spots on the skin, which we remark in most women who have conceived, have no other cause than this action of the sperm on the whole animal economy, independently [of that which it exerts on the womb and ovaries.

All parts of the body concur in the act of fecundation—the shock is universal; life seems to be arrested in all the senses, and in all parts of the body to concur in the excretion or ejaculation of the sperm; and it is the same in woman—it is the climax of feeling.

The sexual organs have also intimate relations or nervous sympathies with the exterior of the body, with the skin, the hair, the feathers, the scales, and, in general, with the beauty of all beings.

Love depends very much on the vigour of health, on strength and courage, because the object of Nature is the perfect development of the species, and the perfect conformation of individuals. "She enforces against us," says J. J. Rousseau, "a law

like the the Spartan, which consigned to death the feeble and the delicate, and takes the greatest care of robust individuals."

The end or object of love is not pleasure only, as is generally supposed, but generation; for pleasure is not complete but when fecundation is effected, and then love ceases. Nature, therefore, has not pleasure alone in view, but the multiplication of the species. The presence of a pregnant woman does not excite the same affection in the heart of man as the aspect of a young damsel. This individual inspires love, that respect; thus Nature, superior to all human conventions, has ordained it. In love, kings are as other men; they have no more pleasure than shepherds, and Nature has equally divided all her gifts.

8.—*Comparative Power of the Generative Faculty in Plants and Animals.*

The generative power, that wonderful attribute of organized beings, is differently developed in vegetables and animals. In all the families of the agamous plants, or those in which the sex is unknown, as the truffles, algae, &c., as well as in the radiary animals, polypi, hydres, meduses, actinies, holothuries, &c., reproduction is effected by a simple division of the individual, which forms complete individuals, or by shoots, or by expansions of the procreative being when it has a superabundance of nutrition and life. Many of the most perfect plants, in which the sex is very apparent, as all the *aphanerogamous*, are capable of multiplying themselves by grain and seeds, by shoots, sprouts, suckers, portions of the root, twigs, &c. This is not so with animals of sex, which must couple to engender, as all the dioic species, or by themselves, as the monoic, such as the bivalvular molluscs.

Among the species provided with sex in the animal and vegetable kingdom, there is a great difference relative to fecundity.

Female plants seem more capable of multiplying, even without the intervention of the male. Thus, we observe females of dioic vegetables which are cultivated in Europe alone, as the *broussonotia papyrifera*; the *populus balsamifera* propagate by twigs, whilst all the male individuals of this class are more feeble, and do not multiply by the same means. Even some female plants pro-

duce male flowers; as Forster has observed in the islands of the South Seas. Spallanzani has seen the female of the hemp produce fecund grains. Again, the stamens are sometimes changed in flowers, while the female organs remain immutable.

In the animal kingdom, on the contrary, male individuals are more robust, and more capable of fecundating than females; and as to the proportion of the species, one bull or one cock is sufficient for a number of females, which is the inverse of plants, in which the stamens almost always surpass the number of the pistils.

The relative multiplication of plants and animals appears to be equally prodigious; and it is doubtful even if the animal kingdom has the superiority. A sprig of maize produces 2,000 grains; a sun-flower has double the number; a stalk of poppy affords 32,000 seeds, one of tobacco more than 40,000; an elm-tree furnishes 100,000 grains annually; a clove more than 720,000, besides those which produce double the number. These are immense, but if all the reproductive energy of a single vegetable was developed into new beings, the earth and the celestial sphere would not be sufficient to nourish them. But this is very insignificant, when compared to the reproductive faculty of animals. I do not speak of the innumerable multiplication of insects, or of the five or six thousand eggs (ova) which a frog supplies every year, nor of the gnats, nor of the locusts, nor of the insects in Tartary, which are so dense as to obscure the sun, and devour, in a few hours, all vegetable productions; nor do I cite aquatic animals, more especially fishes. I may observe, however, that, the smallest herring has nearly 10,000 eggs. Bloch found 100,000 in a carp that weighed only half a pound. P. Petit discovered in another, about four inches long, 262,820 eggs; and in another, weighing six ounces, 342,144. A perch had 380,000, and a female sturgeon was computed to have 7,653,200 eggs. Lewen Noeck calculated, in this manner, 344,000 eggs in a cod fish. This fish alone would, in a few years, produce millions of its kind; and if these reproduced in proportion, millions of millions would be engendered in turn, which shews the immense, nay, the incalculable fecundity of nature.

(To be continued).

CORRESPONDENTS.

Paracelsus.—What between mummies and star-gazing, Simon Pure must think his fifty readers confirmed lunatics.

The Westminster Medical School and its Prizes.—We have received six communications about the distribution of prizes at this school, all complaining of partiality on the part of the adjudicators. We inform our correspondents, that the same system prevails in every school in London, that resorts to the clap-trap system of offering prizes. House pupils, private pupils, and apprentices are sure to obtain them. It is on this account we declined noticing the distribution of prizes. We have the particulars of every school which has awarded them, and shall, if circumstances demand it publish them.

An Advertiser.—We cannot comply with the request; our publisher never deviates from the established scale of terms, which is 30 per cent. lower than that of some of our contemporaries—if he wants to see himself in print and be read by about six dozen nincompoops, and only pay the advertisement duty, the office for such advantages is in the neighbourhood of the Strand.

A Liverpool Friend, Edinensis, An Enemy to the Scratch Journal, and many other correspondents will see on the wrapper of the day the information they require.

Dr. Thomson's Lectures.—The Toxological part of Professor Thomson's Lectures consisted chiefly of chemical experiments which are to be found in any modern system of chemistry. For this reason we decline to publish them.

M. Broussais' Lectures were delivered last session, and will be regularly continued.

Dr. Corrigan's Lectures.—We owe it to our readers to state, that we used every effort to give the continuation of these valuable lectures. We wrote several times about them but have not as yet obtained them.

A Medical Student.—Quain's Anatomy, is infinitely superior to the Dublin Dissector, which is only fit for a novice, or a first year's student.

C.—Mr. Hughes is a gentleman in the fullest sense of the word, and gave us no information that was not proved by Dr. Tweedie in the Court of Common Pleas. Had we not the highest opinion of the integrity and veracity of Mr. Hughes, we should not have published his statement that Dr. Tweedie had refused to meet F. H. Ramadge, in consultation as advocate of St. John Long, and now advertising curer of consumption.

Berkshire Medical Association.—A Society bearing this title has been established at Reading to protect the interests of the profession against the conduct of the Poor law Commissioners. Every respectable practitioner in the county has joined the Society.

THE

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SATURDAY, JUNE 13, 1835.

VOL. VII.

LECTURES
ON THE
INSTITUTIONS OF MEDICINE,

DELIVERED BY JOHN FLETCHER, M.D., F.R.C.S.E., AT THE ARGYLE SQUARE SCHOOL OF
MEDICINE, EDINBURGH; SESSION 1834-35.

LECTURE XXI.

Stimuli to Irritability—(continued).

A THIRD stimulus to irritability, and one very analogous to the two first mentioned, is electricity, and particularly that form of it which is called galvanism. Like caloric and light, it pervades every form of matter; and although its existence is not perceptible, any more than theirs, till the equilibrium of its distribution is destroyed, it has probably, even in its latent state, a very considerable influence on the actions of organized beings. Positive and negative electricity, it is almost superfluous to remark, stand in the same relations to each other as heat and cold—as light and darkness—that is to say it is the former alone which has any existence, and in no degree of negative electricity are plants and animals quite withdrawn from the agency of this principle. It is however only in its sensible state that this agent can be recognised; and in this state there are few or none, except caloric, which can compare with it in universality of action, since every irritable organ appears to be subject to its agency, and none whatever is a match for it in power, since the results are more striking from this than from any other stimulus to irritability, and it takes effect long after every other has failed. It is remarkable, however, that it appears to exert no action on the irritability of plants, except when applied in the manner of a spark or shock (a); whereas on that of animals, from the leech up to man, whether suddenly or continuously transmitted, its action is most powerful and striking. As either applied directly to the several organs, or conducted to them by the respiratory or motiferous nerves, it excites the irritability of the respiratory muscles, and therefore may be made to effect respiration; that of the heart, and therefore circulation; that of the secreting and absorbing vessels, and therefore nutrition, secretion, and absorption; that of the stomach, and therefore digestion; that of the membranes of the nostrils, eyes, and ears, of the tongue, and of the skin, and therefore indirectly—the irritations so excited being taken cognizance of, so long as the animal functions are unimpaired by the respective sensiferous nerves—the sensations of smell, sight, hearing, taste, and touch; that of the voluntary muscles, and therefore various writhings of the features and contortions of the limbs; and it does all this more forcibly, and for a longer time after apparent death, than any other known stimulus (b), and may often therefore be substituted with effect for any of the ordinary stimuli, such as caloric, sympathy, volition, and so forth, by which these functions are naturally excited (c). It is probable that to every form of organized beings, a certain definite quantity of galvanism, in relation to the capacity of each, as well as of caloric and light, is essential to the healthy performance of all its functions; but it is very doubtful whether such beings are in general provided with the means of either extricating or absorbing it, as in the case of caloric, so as to render themselves, in this respect, in some

(a) Van Marum, Humboldt, &c.

(b) The most extensive series of experiments of this kind was performed on the victims of the guillotine, at Turin, by Nysten, who employed galvanism as the test of

the duration, in each part of the body, of its irritability.

(c) Hence its advantage, as a remedial agent, in asthma, dyspepsia, palsy, &c.

measure independent of the medium which surrounds them. It has been supposed, indeed, that plants develop positive electricity—that is to say extricate this principle—by night, owing to the exhalation from them of carbonic acid, formed, as is imagined, by the direct union of carbon and oxygen, and that they develop negative electricity—in other words absorb this principle—by day, owing to the exhalation from them of pure oxygen, and that it is by this means principally that the varieties of the atmosphere, with respect to its state of electricity, are produced (a); and that numerous animals have the power of at least extricating electricity is sufficiently well known. This is very remarkably the case with the electrical eel (*Gymnotus*, 26), the electrical silure (*Silurus*, 29), and the torpedo (*Raia*, 31), and many other aquatic animals possess the same power in a greater or less degree; but in all the electricity so developed appears to be confined to a particular organ of the animal, and to be extricated for purposes very distinct from that of acting as a stimulus to its irritability. The relation in which electricity stands to living action, or to life, has been above pointed out: but, not content with regarding this principle as the most efficient known stimulus to irritability, some physiologists have amused themselves, in the same manner as others have done with respect at one time to heat, and at another to light, with representing it as identical, sometimes with life, and at others with the so-called nervous energy. The doctrine is altogether so loose and untangible, that it is almost impossible to contend with it systematically—"Your true no-meaning puzzles more than wit"—but as it has attained, perhaps from its vagueness, an undue degree of popularity with a certain class of physiologists, it will be necessary to say a few words on the subject. And first, with respect to the alleged identity of electricity, or galvanism and life (b). Of course if the notion concerning life, already so fully inculcated—that it is not a substance at all, but a mere mode of being—be well founded, it is quite out of the question entering at all into the inquiry whether it be identical with electricity or galvanism, or any thing else; but admitting, for a moment, that life is a substance, what evidence have we that it consists merely in electricity or galvanism? We have seen already that the principal arguments adduced in favour of the existence of life, as an entity, are, 1st, that such an entity is essential to the organization of a living being; 2nd, that such an entity alone is competent to effect the characteristic actions of a being so organized; and 3rd, that our belief in a future state of existence hinges on the presumption of the existence of such an entity: and it is of course incumbent on those who contend for the identity of life, and electricity or galvanism—not indeed to apply these arguments to prove the existence of electricity or galvanism as an entity—for that is unquestioned—but to shew that the latter is competent to effect, and does in reality effect, all those phenomena from which the existence of life, as an entity, has been inferred. Now, in the first place, does electricity or galvanism organize substances into which it is thrown? Does the prime conductor of an electrical machine, or the positive wire of a galvanic trough, become organized in virtue of the electricity or galvanism which they receive; or do any other matters in which these principles are accumulated undergo organization as a consequence of such accumulation? The idea is absurd. Nevertheless, if organized beings became so solely in virtue of their substantial life, and this were identical with electricity or galvanism, any matters transmitting or receiving these principles must of necessity become organized beings. Again, do all matters by which these principles are conducted, or in which they become collected, manifest the characteristic actions of organized beings; or, on the other hand, are such actions excited, by these agents, only in those which are already possessed of the property of irritability or vitality, quite independently of their operation? The answer is obvious. Nevertheless, if life were nothing but electricity or galvanism, any matters into which these principles were thrown must necessarily display living action; and it must be equally correct to say that an electric or galvanic apparatus produces its phenomena by means of the life which it develops, as that a plant or animal lives and moves by means of its electricity or galvanism: further, if such were the case, we ought to be able, at any time, to stop the living actions of one body and to excite the actions in another—that is to say to withdraw and communicate life, precisely as we withdraw or

(a) Pouillet, Ann. de Chim. and de Phys., t. xxxv, Dr. Graves' Lectures, &c.

(b) That heat was life, that light was life, that air was life, that water was life, that every thing in short with which mankind was acquainted was life, had been successively maintained, and each occupant of the vital chair had been pretty satisfactorily in turn dislodged, when, fortunately for the lovers of an absolute monarchy in physiology, electricity was discovered, and electricity was at once promoted to the vacant

throne. The notion of the identity of this principle and life seems to have been promulgated for the first time, as already remarked, by John Hunter, and it was of course adopted by his popular pupil, John Abernethy: fortunately, however, the reputation of both of them is founded on a more solid basis than the propagation of this flimsy and shallow hypothesis. Lamarck, as we have just seen, represented life as a compound of this principle and light!

communicate the principles in question (a). And how can it be explained, upon the presumption of the identity of life and electricity or galvanism, that these principles cannot excite living action, even in organized bodies, beyond a limited time—life should surely always make live: nay, that excess of these principles should be immediately fatal to both plants and animals?—death should surely not result from excess of life (b). Is it not, on the other hand, evident that, in the former case, the electricity or galvanism, being a mere stimulus, becomes inert as soon as all irritability has departed; and, in the latter, that, in the same character of a stimulus, it destroys all irritability by the excess of irritation which it produces? Lastly, who will be so wild as to contend that the immortal part of our frame—that which leaves our bodies at the instant of death, and is destined to survive us to all eternity—is electricity or galvanism? Yet such must be the case if life, or the presumed “vital spark of heavenly flame,” and these principles be identical. But it is mere waste of time dwelling any longer on this rambling dream: not only is life nothing, and incapable therefore of being identical with any thing, but, were it anything, every view of the subject would demonstrate that it must be at least *sui generis*, and as distinct from electricity or galvanism as one thing can be from another. But are these principles identical, not indeed with life, under which term are jumbled together all kinds of susceptibilities and all kinds of stimuli in most admired disorder, but with nervous energy, as it is called; by which term seems to be, in this case, understood—for it has been used in twenty different acceptations—not a susceptibility of any kind, but all kinds of stimuli, which, originating in the body of an animal, are capable of being conveyed by the nerves. According to this doctrine not only has electricity or galvanism, as artificially extricated and applied, been made to excite all the vital actions, and become thus a good substitute for the natural stimuli when those are defective, as has been already stated, but it is electricity or galvanism which, as constantly extricated either in various parts of the body, owing to the mutual action of its several solids in general, and in particular of nerve and muscle (c), or in the brain alone, owing to the mutual action of the alternate layers of grey and white matter of which it is composed, almost in the same manner as a voltaic pile is of alternate plates of zinc and copper (d), and conducted by the several nerves, naturally excites these actions. It is upon this agent accordingly that immediately depend, it is said, not only respiration, circulation, digestion, and the other functions consisting in sensible motion, but, in a more especial manner, secretion, and the rest of those which consist in molecular motion; the nature of which, if this hypothesis be adopted, is no longer involved in any obscurity. It was noticed, in evil hour, that the blood, when withdrawn from the body, and subjected to galvanism, had its albumen coagulated, and its salts separated (e); and again, that the ingredients of a solution of muriate of soda could be made to pass separately through an organized membrane by the same means (f). It hence became established that it was electricity or galvanism alone which performed all the incessant chemical actions of the living body; and, acting directly on the blood (g)—not merely stimulating the vessels to do so, which would have been a simple, instead of a compound absurdity—converted this blood into every variety of solid and fluid, organized or otherwise, and transmitted each through the coats of the blood-vessels; and animal heat being soon afterwards discovered to be a secretion, it was to be expected that galvanized blood would be converted, among other things, into caloric, which was accordingly found to be the case. In what manner, however, electricity or galvanism, which is always the

(a) Lawrence. Dr. Wilson Philip also, a chief advocate of the hypothesis next to be mentioned, admits that “life exists only in living bodies, and no task can be more hopeless than to look for it elsewhere.”—(On the Vital Functions, 1826).

(b) “A calf’s head,” says Sir Charles Bell, “is made to yawn, or a man cut down from the gallows to move like a figure of cards pulled with strings. The jaws move, and the eyes roll, and this is done by conveying the galvanic shock to the nerves: hence it is supposed that nothing less than the principle of life itself can work such wonders, and that galvanism is that principle. But in no circumstance is there a resemblance; and the whole phenomena resulting from galvanism transmitted through an animal apparently dead are fairly to be attributed to its being a high stimulus, conveyed through the moist animal body, and exciting the powers

(properties) which remain isolated in the several parts; and in exciting these powers (properties), far from renewing them, it exhausts them altogether.”—(Useful Knowledge). It is quite true,

“*Nutritur ventis, ventis extinguitur ignis,
Lenis alit Flammos, grandior aura necat;*”

but had the winds been identical with the fire, the gale with the flames, it is impossible that this could have happened.

(c) Sprengel.

(d) Reil, Rolando, &c.

(e) Brande (Phil. Trans. 1809), Sir E. Home, &c.

(f) Wollaston (Phil. Trans. 1811).

(g) It is expressly said by Wilson Philip, “The vessels only convey the fluids to be operated upon by the nervous power” (i. e. galvanism)—(On the Vital Functions, 1826).

same, acting, not upon the capillary blood-vessels—each set of which may be presumed to have its own specific character of irritability—but upon the arterial blood, which is likewise always the same, should give rise, in different parts of the body, to depositions so entirely different from each other, as are the several secreted solids and fluids, remains to be explained (a), the suggestion that these differences may depend upon the different quantities of this agent supplied to the different secreting organs (b) being a very improbable one, inasmuch as, however such differences might modify the quantity of the secreted matters, it is impossible to conceive that they could so materially influence their quality. But assuming, for a moment, that electricity or galvanism were constantly so extricated within the body—an assumption altogether gratuitous—and that it were the main stimulus to all the vital actions, sensible and molecular, it would be rather hostile, than favourable to the opinion that it is identical with the so-called nervous energy. We know of only two modifications of this energy, regarded in the light of a stimulus—that of sympathy and passion, or instinct, and that of volition—and both appear to act rather as accidental and occasional stimuli on the irritability of certain parts, than essentially and constantly on that of all; so that any stimulus supposed to be in perpetual and universal operation cannot be identical with such nervous energy. Moreover, each of these modifications of the nervous energy is quite distinct from the other, and is conducted by its own proper department of the nervous system—the former probably by the so-called respiratory, the latter certainly by the motiferous nerves—which electricity or galvanism, when artificially applied to the body, is conducted equally well by both; to say nothing, therefore, of the impossibility of its being identical with both, it cannot be identical with either. Again, nervous energy is found to be in general at once intercepted by tying the nerve by which it is naturally conducted, whereas, the conveyance of electricity or galvanism is not at all obstructed by this operation; and if a respiratory nerve, in direct contact with a motiferous nerve, be so tied, or vice versa, the stimulus of sympathy and passion is intercepted, while that of volition is unobstructed, or the reverse, whereas electricity or galvanism must be quite unsusceptible of any such isolation. But the looseness of the arguments which would establish the identity of these principles with either life or nervous energy, must be too palpable to require any further exposure; and it is only surprising that physiologists should have been so long in universally recognizing the true relation in which this powerful agent stands to both; it is a stimulus to irritability, and in so far analogous to the nervous energy in its capacity of a stimulus, and it is the most powerful means of promoting life, or living action, with which we are acquainted; but as it is *not* identical with the one, so it *cannot be* identical with the other.

The next stimulus to irritability to be spoken of is the medium, whether air or water, which immediately surrounds organized beings, and of which, in the process of respiration, they appropriate a portion to themselves. This stimulus acts principally on the irritability of the proper respiratory organ and of the surface; in the former of which it excites the capillary pulmonary vessels to those actions by which they give off and take up the requisite gaseous substances, while in the latter it is believed to excite, not only the capillary vessels of the whole dermoid tissue to those actions by which its peculiar secretions and absorptions are effected, but also, through the skin generally, in some measure the subjacent parts, and thus to promote the healthy excitement of every organ of the body. That the atmosphere or water generally is a stimulus to the respiratory organ, whether vesicles, lungs, or gills, as the alimentary matters are to the stomach, is unquestionable; and that, while its secretions are excited by these media in general, its absorption of a portion of the oxygen, contained in these media, is excited chiefly by this principle, is manifest from the comparative rapidity with which it is found to be absorbed from other internal surfaces which are sometimes accidentally exposed to its action (c). Similar to this is the action of the atmosphere or water in general, and of the oxygen in particular, on the external surface of an organized being, regarded, in some degree, as a second respiratory organ; but these agents are supposed to have another important relation to this external surface, regarded as a general envelope of the whole being, inasmuch as, by stimu-

(a) Dr. Alison (Quarterly Journ. of Science, 1819).

(b) Dr. Hunter Lane (Liverp. Med. Gazette, vol. i, p. 305).

(c) Thus in pneumothorax, abdominal tympanites, pneumatosis, and other diseases in which there are æriform depositions in various parts of the body, the gas, which is at first in general merely atmospheric air, soon loses its oxygen, and becomes pure nitrogen. This can arise only from the sti-

mulus imparted by the former having promoted its absorption; but there is, nevertheless, no good ground for the vague apprehensions sometimes entertained from the accumulation of air in "the innermost recesses of the body," with which the second Dr. Monro has the credit of having filled the minds of the vulgar, both in and out of the profession. It perhaps merely turns them for a time into a kind of respiratory surface.

lating this surface by the pressure which they exercise upon it, they act indirectly upon all the organs of the body, and maintain them in a state of healthy irritation; and it has been accordingly presumed that it is to the increased pressure of the air that we owe the alacrity and vigour which we usually experience on a dense cold day, and from its diminished pressure that result the languor and lassitude so generally experienced under opposite circumstances. It is very generally known that the pressure of the atmosphere, under ordinary circumstances, is equal to 15 lb for every square inch of surface, and that that of water, while it is only the same as this immediately below the surface, goes on increasing as it becomes deeper, till at the depth of thirty-four feet it is doubled, and so on in proportion. Upon these data, the external surface of a man of ordinary dimensions is represented as sustaining, under the ordinary barometric pressure, a weight equal to about 40,000 lb ; but, as the range of the barometer, in this country, is through about 3° , or one-tenth of the whole average height of the mercury, it follows that he must be subjected at one time to a pressure of 4000 lb more than at another. Nothing can be more fallacious, however, than the conclusions to which these premises have led respecting the average stimulus, and the greater or less degree of this at different times exercised by the atmosphere—and of course by water—on the irritability of organized beings; for we must continually remember that these beings press upon the medium which they inhabit from every point of their substance with precisely the same weight as they are pressed upon by this medium, so that any general effect of this external pressure, regarded as a stimulus, must be neutralized, and consequently, while the actual amount of such pressure must be a point of little or no moment, any change in this, gradually as such changes are under ordinary circumstances made, and taking effect, as they can do, only till the equilibrium between the external and internal pressure is established, could have little or no effect in modifying such stimulus, had it any existence. And that this must be the case will be abundantly obvious, if we estimate the amount of the actual pressure made by the atmosphere, not upon the external surface of the human body, but upon the internal surface of the lungs, which has been computed to be from thirty (a) to a hundred times (b) greater than the former, and which—taking the mean of these computations—must consequently sustain, under the ordinary barometric pressure, a weight equal to about 2,600,000 lb , and be subject to a variation of pressure equal to 260,000 lb ! We seem to have, in fact, nothing whatever to do, under ordinary circumstances, with the actual pressure at any time exercised on organized beings by the medium which they inhabit, regarded as a stimulus, nor even with any variations of this, unless such variations are made so suddenly as not to allow time for striking a balance between the pressure from without and that from within; and the greater or less energy of the functions, therefore, commonly attendant respectively on a dense or rare atmosphere, appears to be the effect, not of such density or rarity, but of the cold or heat of which they are in general the concomitants. It is a very different affair, however, if such changes are very abruptly effected, as occurs from suddenly descending to great depths below the water in a diving bell, or from suddenly rising into the atmosphere in a balloon, or even rapidly ascending a high mountain; from all which very remarkable consequences are sometimes experienced (c), although any extraordinary hilarity, in the former case, or any great depression in the latter, are not among the number. Such changes as these, however, appertain, not to the natural stimuli to the healthy functions, but to the exciting causes of disease; and, upon the whole, it seems fair to conclude that the medium which surrounds organized beings, however much it may influence their physical condition, and however essential it may be to their respiration, exercises in general, by its mere pressure, no stimulus upon their irritability. Such a being, whether almost in vacuo, or in a medium condensed to hundreds of atmospheres, would still, perhaps, after a time, maintain a balance of pressure from without and from within; so that, changed as might be its volume, and laborious or impossible as might be its fundamental function, the stimulus from mere pressure would perhaps be the same.

The stupendous condor of the Andes is known to endure an atmosphere the pressure of which is less than one-third of that which we inhabit, while fishes, on the contrary, are presumed to exist at a depth of upwards of seven hundred fathoms of water! The stimulus of the air, as instrumental to respiration, is much less essential to the life of the sluggish water-plants than of others, and to that of cold-blooded than of hot-blooded ani-

(a) Monro.

(b) Lieberkuhn.

(c) Among the chief of these are excessive difficulty of respiration, inflammations, copious hæmorrhages from the various outlets of the body, acute pain in the ears, &c., all which are very easily explained. The usually asthmatic habit and blear eyes of

pearl-divers, and the abundant hæmorrhages which whales are accustomed to suffer, upon rising again to the surface of the water, after having dived to great depths upon being harpooned, furnish good illustrations of the deleterious effects of any sudden changes in the pressure of the surrounding medium.

mals in general, being the more so, in all tribes of organized beings, the greater their activity—hence it is the most so in beasts and birds. Perhaps there are no very well authenticated instances in which an adult human being has been deprived of air for more than five or ten minutes, without being asphyxized (a), although some very wonderful stories, of divers and others, are related to the contrary, whereas the frog is capable of sustaining a want of air for thirty hours, and the leech or earth-worm will survive for days or weeks, although surrounded by oil, or kept in vacuo. New-born animals also of all kinds are less rapidly affected by want of air than adults, for reasons which need not be here explained (b). In like manner, among aquatic animals, some fishes, as the mackerel (*Scomber*, 26), the salmon-trout (*Salmo*, 29), the herring, and the shad (*Clupea*, 29), are very rapidly asphyxized by being removed from the water, as instrumental to their respiration, while others, as the eel (*Muræna*, 26), the perch (*Perca*, 28), the carp and tench (*Cyprinus*, 29), can live for hours or days without this stimulus. The cases in which living animals, both terrestrial and aquatic—oysters, worms, cray-fish, beetles, frogs, toads, serpents, lizards, even rats—have been found imbedded in solid rocks, or in the heart of trees, are familiar to everybody; and are explicable probably on the presumption that such substances are sufficiently porous to admit the small supply of air or water requisite under circumstances in which all the functions must be presumed to have been so far from active (c). We know, on the one hand, that moles receive air through the pores of the earth, and that human beings have been sometimes engulfed in snow for many days without being asphyxized; and, on the other, that all animals during their hibernation—and the animals just alluded to were in a state very analogous to this—require comparatively a very small supply of these stimuli to support their existence. With respect to the instrumentality of the air or water which surrounds organized beings to various other functions—such as to the circulation of the blood, which the former at least is presumed to promote, by the pressure which it exercises on the veins, upon a vacuum being formed about the heart, either by the natural resiliency of the lungs, or during expiration; to smell, taste, hearing, and the voice, to which they are essential, as either conveying the immediate stimuli of the odoriferous or sapid particles of other bodies, or of vibrations excited in themselves, or admitting of such vibrations; and, lastly, to locomotion, as exemplified in flight and swimming, or even in progression on land against gravity, in the manner of many molluscous animals, and insects, some lizards, and a few amphibious animals, to which they minister by admitting of what is called suction—with this we have no concern at present, since it is only as stimuli to irritability that they are at present a subject of consideration, and their action, in all these cases, is, not in exciting irritation, but in either superseding, as is supposed, such irritation by a merely physical process, in conducting the immediate stimulus which is to effect such irritation, in being themselves affected by such irritation, or in rendering such irritation available. Such, then, appears to be the relation in which air or water stands to life; that neither of them, nor any one of the principles of either of them is, or can be, identical with the latter, as has been idly supposed (d), needs not be here insisted on.

(a) Fothergill, Davy, Brodie, Edwards, Roesler, &c. It is a very different question after how long a period, from the supervention of asphyxia, life is restorable—that is to say, how long irritability or vitality may survive the abstraction of one of the principal stimuli by which it is excited.

(b) Edwards.

(c) It was found by Hérisant that many animals could live although entirely surrounded by Paris plaster, which almost instantly perished if the pores of this were obstructed by oil or any other means. The fetal chick also is well known to receive air through the pores of the shell, and to be soon suffocated if these are stopped up.

(d) In Hebrew, the words *nephesh* and *ruach*, in Sanskrit, the words *atma* and *pranah*, in Greek, the words *Ψυχη* and *Πνευμα*, and in Latin, the words *anima* and *spiritus*,

all directly inculcate the same vague idea of the identity of life, soul, spirit, ether, wind, air, and breath, and sufficiently indicate the prevalence of this idea from time immemorial; and the remnants of it are still perceptible in the common phrase of "dying for want of breath," which is intended as equivalent to saying "dying for want of life." We have seen, however, that by some certain of the ancients, life was represented, not as air, but as water. In after times air was sunk into one of the six non-naturals, as already mentioned; but it was again—or, at least its oxygen—exalted to honour in the hands of Girtanner, who, at a time when chemical explanations of all physiological facts were in vogue, once more deified it, not indeed as life itself, but as the immediate and most essential stimulus to vitality.

LECTURES
ON THE
PHYSICAL EDUCATION AND DIS-
EASES OF INFANTS,
FROM BIRTH TO PUBERTY.

BY DR. RYAN,

*Delivered at the Medical School, Westminster
Dispensary, Gerrard Street, Soho;
Session 1834-35.*

LECTURE XXXIX.

*Hereditary Syphilis—Congenital Diseases of
the Skin—(concluded).*

GENTLEMEN—I occupied your attention at our two preceding meetings in adducing proofs that small pox may be communicated by the mother to the infant in her womb; and I dwell upon this point of pathology, as it determines a question of great importance, upon which physicians have for a long time entertained different opinions, whether an unborn fœtus can be affected with syphilis. In addition to the authorities already cited, I may add the names of Mauriceau, Sydenham, Watson, Sir Astley Cooper, all of whom describe cases of congenital small pox. Almost all the authors who have written on this disease, have affirmed that the mother who is affected or contaminated may transmit syphilis to the infant in her womb. I shall further prove, that an infected father may communicate the venereal disease, though he has no primary or secondary ulcers, not only to the infant, but also to its mother.

Many physicians, however, think on the contrary, that the infant is never infected in the womb of the mother, and that it cannot contract the disease unless in passing through the vagina and genital fissure, when it comes in immediate contact with open ulcers, and even then it is scarcely ever contaminated. "If we reflect," says, M. V. Andry, a staunch advocate of this side of the question, that the discharge of the waters, ought necessarily, in lubricating the diseased parts, to remove the pus on the surface of chancres; that the infant in most cases passes through the vagina rapidly; that it is covered with a caseous or tenacious matter, more or less thick; that the parts susceptible of being infected, such as the mouth, the external organs of generation, &c. must be in immediate contact with the surface of the syphilitic ulcerations of the vagina; that the fœtus possesses very little vitality or sensibility; how little aptitude has a new-born infant, especially in the first days of its life, to contract contagious diseases, even whilst plunged in the very focus of infection, &c.; we can easily conceive how difficult it is for the fœtus to be infected, even in this manner, which is the only admissible one. Numerous facts further prove, that an infant the issue of in-

fectured parents can come into the world perfectly sound, and always preserve good health; and that it is extremely difficult to distinguish the characters of syphilitic infection in new-born infants. The principal symptoms are inflammations and ulcerations of the external mucous membranes, and certain cutaneous eruptions, such as phlyctenæ, pustules, &c. Hippocrates has however observed, in his book *de Morbo Sacro*, that infants born of sound parents may have the mouth, the eyes, the ears, external genitals, &c. affected with inflammations, mucous discharges, and even ulcerations, aphthæ, &c. which disappear by the use of simple lotions. We may therefore conclude, from the preceding facts, that every species of syphilitic infection from the mother to the infant is impossible."*

This author cites a case related by M. Bosquillon, which was pronounced to be syphilis by MM. Doublet, Fabre and Louis, which got well by ordinary treatment. The preceding extract appears very conclusive, though nearly every fact stated in it is disproved by observation. It is well known that it is extremely difficult to wipe or wash off the matter of a chancre, and therefore, the sudden escape or passage of the waters (amniotic fluid), during labour could not effect it. Again, the infant does not in most cases pass through the vagina rapidly, nor is its skin always covered with tenacious matter, nor is there any valid reason to doubt that its eyes, lips, or genitals may come into immediate contact with the ulcers on the mother; nor is this the only mode of infection, as we shall see hereafter. M. Andry is correct, however, in stating that new-born infants are not susceptible of contagion, but this does not prove that the diseases of one or both parents, like their moral and physical dispositions, are not transmissible to the infant at the moment of its procreation. It is also inexact to state that infants, the issue of infected parents, may be born healthful and always preserve good health; as daily experience proves the contrary. Such infants, though rarely born in health, very speedily shew symptoms of syphilis. In fine, it is contrary to the received opinion of the moderns, that infants may be born with the usual symptoms of syphilis, though uncontaminated by that disease; and it is also well known to experienced and observant practitioners, that infants born with such symptoms are affected with them soon after birth, and are most speedily cured by mercury. These, and many other facts which I shall immediately adduce, completely disprove the accuracy of M. Andry's conclusion, that every species of syphilitic infection from the mother to

* *Memoire sur les Maladies du Fœtus et des ses Annexes. Par V. Andry, D.M.P. Journ. des Progrès des Sciences et Institutions Medicales, t. 1, 1830.*

the infant is impossible. A preponderating majority of the ablest physicians of all countries maintain the contrary opinion. The following conclusions are deducible from their observations.

1. The venereal disease, in a primary or secondary form, may be transmitted by either parent to the offspring.

2. When the parental constitution is highly contaminated with secondary syphilis, the infant will decline in strength and its movements be diminished in the womb about or after the sixth month of pregnancy, the mother will cease to feel it move between the sixth and seventh month, and it will be born dead between the seventh and eighth month, its body being in a state of incipient decomposition. This result may be observed in several pregnancies (I have known it occur in twelve) until the disease is cured in either or both parents.

3. When there is a less degree of parental infection the infant will be born alive, but thin, shrivelled, and partially affected with a copper-coloured, or other well marked venereal eruptions about the genitals or on other parts of the skin, or with ulcerations in various parts, as hereafter mentioned. Mercury administered to the mother or infant, will alone effect a cure and establish the health of the latter.

4. When the parental constitution is still less affected, the infant may be born in apparent health, but in a few weeks will present syphilitic symptoms, which will yield to mercury only.

5. If the infant soon after birth have one or more ulcers on the lip or lips (chancres), it will cause a similar affection of the nipple or nipples; these will contaminate the lips of a healthy infant or adult, and either may propagate the disease to an indefinite extent.

6. When conception is effected, the administration of mercury, sarsaparilla, &c. to the parents will not save the life of the infant, when their systems are intensely infected; but after the birth of the infant, they should live separately for six or eight weeks, or until their medical adviser thinks they have taken sufficient medicine to exterminate the taint in their constitutions. When this is accomplished, which is generally, but not always the case, a living, healthful infant will be produced, and a numerous progeny may succeed it.

According to the preceding categories, syphilis may be communicated to the embryo at the instant of conception, or during parturition, or during lactation, when the nurse has venereal sores about the nipples. A woman may be contaminated with secondary symptoms, or with primary sores, or she may be infected after conception, and in such case there may not be time for secondary symptoms to appear, as these seldom occur for months, and sometimes years after the primary ulcers. It is for this

reason that a woman who contracts the disease after conception, and during any period of pregnancy, may bring forth a living infant free from the disease, though her next may be infected, and every future infant, until the mother is cured of the secondary form of the malady. The secondary form of syphilis is said to be communicable through the breast milk; but this is not always the case, as we shall see immediately by the citation of a fact in point.

I shall now proceed to adduce unanswerable proofs of the foregoing statements, and first describe the appearances of syphilis in new-born and very young infants.

Congenital Diseases of the Skin—Syphilis.—The disease may manifest itself in the forms of the various eruptions, as pustules, pimples, scales, phlyctenæ, ulcers, chaps, excrescences, erysipelas, genital discharges, purulent ophthalmia, coryza, or hoarseness. These symptoms may appear at birth, or in a few days or weeks afterwards; the disease may attack any part of the body, but more particularly the mouth, eyes, organs of generation, and sometimes the space round the nails. When phlyctenæ or large blisters are present, they generally affect the shoulders, chest, thighs, and limbs. Ulcerations are most common about the genital organs, and in the folds of the groins and thighs. They are also less frequently observed on the lips, gums, tongue, palate, and vault of the palate. These ulcers are red and hard on their edges, which are elevated, deep or excavated in their centres, and if caused by open venereal sores on the parent, are covered with a tenacious yellow matter. Ophthalmia is the most frequent effect of gonorrhœa, and sets in on the second or third day after birth. One or both eyes become violently inflamed, the eyelids are red and enlarged, and when separated there is a copious discharge of purulent matter. Vision will be speedily destroyed unless the most active and judicious treatment be employed. The conjunctiva or membrane which covers the eyelids and eyes is intensely inflamed, and the cornea or front portion, as well as the whole globe of the eye, becomes speedily affected, and there is the greatest danger of loss of vision, unless the nature of the disease is understood and proper remedies administered. It is important to know that new-born infants are often attacked with slight inflammation of the eyelids of one or both eyes; which is caused by cold, exposure of the eyes to a strong light immediately after birth, such as that of a candle or of a fire. The disease is also caused by the carelessness of nurses, in allowing the soap lather with which they wash the infant after birth to get into the eyes. This simple ophthalmia either disappears in a day or two after the application of cold water, rose water, or the latter with a few grains of acetate of lead. The eyelids are but very slightly in-

flamed, not enlarged or tumefied, and when separated, there is not a copious purulent discharge down the cheek. The diagnosis is therefore easily drawn.

The lining membrane of the nostrils, which is a continuation of the conjunctiva, is often affected by venereal disease, the infant snuffles, it cannot suck, its voice is hoarse, there is impeded respiration, the nostrils are dry, or filled with mucosities, or ulcerated and filled with pus; the cheek may be ulcerated. Some or many of these symptoms are present; and when the infant is emaciated, feeble, delicate, fretful and peevish, having eruptions which defy ordinary remedies, we may suspect venereal contamination.

A great deal of domestic unhappiness is often unjustly excited by the venereal disease, when a woman learns that her husband's former licentiousness is the cause of her having several dead infants in succession. It ought to be known, however, that a man who contracted syphilis long before his marriage, who supposed himself cured and was told so by his medical adviser, prior to his entering into the matrimonial union, may have the relics of the disease in his constitution, though unaware of their existence, and they may cause the distressing occurrence of which his companion has reason to complain. I have been consulted in numerous cases of this kind, and considering them morally as well as medically, I entertain the conviction that an individual who received the best medical treatment, long before his marriage, did every thing in his power to eradicate the venereal disease, was assured by his medical attendant, that no symptom of it remained, that he might safely enter into a matrimonial contract, such person is not, in my opinion, to be blamed, as he did every thing in his power to free himself from the disease, and was told by his medical attendant that he was cured. Neither is the medical practitioner in the slightest degree culpable, as the records of medicine attest that every symptom of the venereal disease may be absent, and yet the constitution contaminated. Moreover, it should be recollected, that few, it is said not more than one in twenty, is free from the seeds of some disease, and that the parties contracting marriage solemnly swear to take each other for life, in "sickness and in health." There is, perhaps, not more than one man or woman in twenty perfectly healthful; and the matrimonial vow is upon the whole, equally just to one as the other. Moreover, the conduct of the husband before marriage should be forgotten; he might or might not be united to his wife, but when united, there is no just excuse for an estrangement of their affections. It is as yet an unintelligible fact, how a man who has no symptoms of venereal disease, yet infects his wife, and they procreate offspring which is born dead

and putrid. There is a mystery about generation which physicians cannot penetrate or comprehend, and perhaps will remain so to the end of time. Who knows any thing concerning the origin or termination of life?

The disease may be communicated by primary or secondary symptoms in either parent; but most commonly the latter. Parents who have no symptom of the disease at the time of marriage, but who have had it, and whose constitutions are still infected, which may be the case for several years, will beget infants with the symptoms already described. It is well known that the primary venereal symptoms may be removed in a short time, or may exist for a month or two, without the supervention of the secondary. Thus, a woman may be infected immediately before or during pregnancy, and may bring forth an infant free from the disease, and in perfect health. In such cases the constitution of the mother is not as yet contaminated; but if during pregnancy she is attacked with secondary symptoms, eruptions, sore throat, &c., then her infant will be infected in a greater or less degree, and will present secondary symptoms at, or in a few days or weeks after birth; or it may be born dead and decomposed between the seventh and eighth months. I have repeatedly prescribed mercury to the full extent for pregnant women affected with chancres or primary sores, and have known that though these disappeared, the infants were affected with the disease at birth, or in a few weeks afterwards.

There is a very valuable essay on this subject in the seventh volume of the *Medico-Chirurgical Transactions*, by Mr. Hey of Leeds, one of our ablest surgeons, entitled "Facts illustrating the Effects of the Venereal Disease on the Child in Utero." He is of opinion that the husband infected with secondary symptoms may communicate the venereal disease to the wife, and of this fact I have known some remarkable examples. It is extremely difficult to explain it, but Mr. Hey, Mr. Lawrence, and most obstetric writers admit it.

Mr. Hey makes use of another fact long known to obstetricians. It is this, that a woman infected by her husband who has secondary symptoms, may communicate the disease to several successive children. Dr. Hamilton, the eminent professor of obstetrics, in the University of Edinburgh, has long inculcated this doctrine; but the late Dr. Beatty contends it was first maintained in Dublin about the year 1792. Both advise conjugal separation for some weeks after the birth of the first infant, during which time the husband and wife should be put under the influence of mercury and sarsaparilla. This plan is generally, though not invariably successful, as every experienced practitioner is aware of the great difficulty of curing some individuals with mercury,

sarsaparilla, &c. I know a lady who contracted the disease from her husband in a few weeks after marriage, though he had not a single symptom for a year previous to his entering into the matrimonial contract, and was declared by his medical attendant to be perfectly cured. The latter informed me in consultation, that he did not believe his patient, who was a scrofulous irritable person, had had syphilis at all, but merely herpes preputialis. The lady, however, who was also a scrofulous subject, was attacked during pregnancy with sore throat, excoriations of the labia, with purulent discharge, and eruptions on the skin. She was not aware of the nature of her complaint. I advised that she and her husband should use mercury and sarsaparilla, with the view of diminishing but not curing the disease in the infant in the womb. Both parties had the mouth affected with mercury; but about the sixth month of pregnancy the lady felt the movements of the infant much weaker. These ceased at the seventh month, and she was delivered in three weeks afterwards of a dead infant, with the extremities livid, the cuticle desquamated, and putrefaction or decomposition considerably advanced. Both husband and wife were again mercurialized, and took large quantities of sarsaparilla; but the next infant was born between the seventh and eighth months, dead and putrid. The same treatment was resorted to on two succeeding occasions, and was followed by the same result. A separation from the moment of the birth of the last infant was now advised for two months, during which both husband and wife were kept under the influence of mercury and sarsaparilla. At the expiration of this period they cohabited, and in due time the lady brought forth a living healthful infant. She is now the mother of five vigorous children. It has been long known that women contaminated with syphilis have a great aptitude for conception; and when this has happened, which was the case in the four pregnancies of the lady whose history I have narrated, and who was most severely affected, the life of the infant cannot be preserved by anti-venereal remedies. Had iodine been in use when this case was treated, a cure would have been effected much sooner, as the proto-ioduret, or deuto-ioduret of mercury would, I think, have speedily accomplished it. These possess very slight, if any effect, on the ovum surrounded by its fluid and coverings, which for the first month of pregnancy are connected in the slightest degree imaginable with the uterus or womb. The history of the development of the impregnated ovum, or of the new being from the instant at which it is vivified, teaches us that neither the mind nor body of the mother, nor any kind of medicine taken by her, can affect it during the first hour, or, perhaps, months of its existence. We can therefore understand

the reason that influencing the mother with mercury after she has conceived, does not free the infant from syphilis; and that she and her husband should live separately from her next confinement, until both have fully tried the requisite medicines. A great many cases, in which dead and decomposed infants were born in succession, between the seventh and eighth months, and which were cured by the parents having taken proper remedies during the period of conjugal separation already mentioned, have fully convinced me of the correctness of this pathology: it is not known, however, to many practitioners. The late justly celebrated Mr. Abernethy inculcated in his lectures, as may be seen in the *Lancet* edition, the correctness of which he verified on oath in a Chaucery proceeding against the publisher of that periodical, that the venereal disease only affected the foetus in utero at the sixth month of pregnancy; because at this time the mother feels the motion of the infant diminish, and soon finally cease. But the scientific obstetrician inquires, how is it, that the infant could have escaped until the sixth month of its existence, both parents being contaminated at the time of its procreation?

The venereal disease may be communicated to a nurse by sores on the mouth of an adult or infant. Mr. Hey relates a remarkable case of a woman who gained her living by drawing the breasts of women after delivery, who infected several from ulcers on the angles of her lips. One woman so infected had sore throat, which was deemed venereal by Mr. Hey and another practitioner. She was treated with mercury, and during the use of this remedy, became pregnant. She was, however, prematurely delivered at the seventh month of pregnancy of a dead infant. She was confined the next year, and delivered of an infant apparently healthy at birth. When it was six weeks old, an eruption appeared on it, which Mr. Hey deemed to be venereal. He accordingly ordered calomel for the mother, and chalk with mercury for the infant. The eruption speedily disappeared, but in eight months afterwards sores were observed on the labia, which were treated by mercury. In seven months afterwards the nostrils became sore, and the infant grew hoarse. The mercurial course was continued for two months, when a perfect cure was at length effected.

The mother brought forth another infant, which was repeatedly affected with copper-coloured blotches, that yielded at length to mercury. This woman was contaminated with venereal disease by the woman who had drawn her breasts from 1771 to 1775, a period of four years, and so were her infants. There are other modes by which syphilis may be communicated.

It is possible that the venereal disease may be communicated by drinking from a vessel previously used by an individual who had

venereal sores on the lips. This is, however, of rare occurrence.

An infant with sores on its lips may infect a nurse who suckles it. Thus a poor woman was employed to suckle an infant so affected, who applied it to the left breast only, and kept the right for her own offspring. A clean sore, not similar to a chancre or venereal one, formed on the left breast, the glands under the arm enlarged, an eruption appeared on the scalp, and sores on the genitals. Both she and her foster infant were treated with mercury. Her own infant, however, remained perfectly well, though its mother laboured under secondary syphilis. The foster child was afterwards transferred to another nurse, whom it also infected. She was apparently cured by mercury, but her next infant, though born to all appearances healthy, when three months old, became covered with a syphilitic eruption, which was also cured by mercury.

The following case, the history of which you heard at the Western Dispensary, and some of you have diligently attended the subject of it at her own residence, while all have heard the particulars and results, is deeply interesting:—

A. G., aged forty-one years, was admitted under my care, December 2, 1834. She was unable to attend, and I repeatedly visited her at her own residence, accompanied by some diligent pupils of this class. She was pale and emaciated, the mother of sixteen children, four of which were born alive, and twelve between the seventh and eighth months, dead and putrid. She stated that she had been infected with syphilis by her husband when she was suckling her fourth infant. She consulted the late Mr. Ollier, of Westminster, an able surgeon, and one of my predecessors at the Western Dispensary, who informed her that she was affected with the bad disease (syphilis). He ordered her mercury. About the sixth month of her next, the fifth pregnancy, she felt the movements of the infant less than on former occasions: these gradually ceased, and she was prematurely delivered of a dead and putrid infant, between the seventh and eighth months. She has borne twelve other infants dead and putrid. Her husband died two years ago, and had been repeatedly infected with syphilis during the twelve preceding years.

At present she suffers from a copious purulent foetid discharge from the vagina, loss of appetite and strength, and great debility.

On instituting a vaginal examination, I found that the os and cervix uteri were destroyed by ulceration; and the points of the five fingers, brought closely together, could readily pass into the uterus. The vaginal discharge was so offensive, that the mother and sisters of the patient could not remain in the apartment with her. My diagnosis was destructive ulceration of the

uterus; result fatal. I ordered her a nourishing diet, wine, quinine, pil. sap., c. opio at bed, and a vaginal injection composed of solution of chloride of lime, 3ij, water, 3viij, t. opio, 3j. This last was to be used with a double syringe, which I lent her. She rapidly improved under this treatment, but in a short time the fæces escaped through the vagina. Previous to this occurrence, the fætor of the discharge was entirely removed, but on a vaginal examination, it was discovered that there was a recto-vaginal aperture or fistula. The same medicines and diet were continued, and the vagina was plugged daily with oiled lint, moistened with a solution of chloride of lime. Mr. Dawson was kind enough, not only to use the syringe, but apply and remove the plug every twenty-four hours, and repeat the operations, for which I feel much obliged. In a few days the fætor of the discharge was completely removed, and the evacuation was nearly abated. The fæces passed through the vagina whenever the plug was removed. The patient seemed to improve, but had frequent severe attacks of hæmorrhage. On the 9th of January, 1835, the hæmorrhage was excessive, the quantity of blood effused nearly filled a chamber utensil. She rapidly sunk after this occurrence; and I obtained permission to examine the body. I also succeeded in obtaining leave for some of the pupils of this class to be present—Mr. Dawson, Mr. Higginbottom, Mr. Ley, and Mr. Howard. I now shew you the morbid appearances. (*The preparation was exhibited and described*). The diagnosis and prognosis of this case were literally correct. The cause of the disease remains to be established; for this reason, that I have repeatedly observed similar cases, in which there was no venereal contamination. The case is, however, of great interest, as it proves that a woman infected with syphilis may bring forth so many as twelve children dead and putrid, between the seventh and eighth months. It corroborates the conclusions of eminent authors on the subject.

When an infant is born feeble and delicate, its skin wrinkled, scaly, or covered with copper-coloured or red eruptions of various kinds, the nostrils, lips, genitals and anus excoriated, the countenance pale, yellow, livid, the voice feeble or hoarse, the whole body thin and wasted and the inability of motion; these signs indicate great decrepitude and are the precursors of a premature death, unless proper remedies be employed. With most of these characters it is not difficult to recognise the venereal disease in new born infants; but the diagnosis will be more or less obscure when these symptoms are isolated, or only a few of them are present. It requires some experience and judgment to distinguish the various forms of the venereal infection from small-pox, crusta lactea, ulcers of the mouth,

with apthæ, coryza or stoppage of the nose, with ulceration of the nostrils, excoriations of the genital and contiguous parts, caused by the contact of the urine and fecal matters; erysipelas of the genitals, congenital discharges of female infants, purulent or leucorrhœal, and simple ophthalmia and coryza caused by catarrh or exposure to cold. The history of the general health of the parents, and their general appearance, will often enable us to arrive at an accurate conclusion as to the nature of the state of the infants.

The venereal disease in new born infants is often exceedingly obstinate and difficult to be cured, in proportion as it has been neglected or is complicated with other diseases. In some cases the new born infant has the nostrils almost impervious; it therefore cannot suck the breast or swallow any kind of food without much difficulty. It rapidly emaciates and speedily dies, unless mercury be exhibited. The danger will therefore vary according to the nature and severity of the symptoms, and according to the means employed for their removal. The only remedy for this disease is mercury, and this may be administered to the mother, nurse, or infant, however young. The exhibition of mercurial pill to the mother or nurse generally effects a cure. Some prefer calomel, and advise it in the proportion of from one twenty-fourth to a quarter of a grain. Modern practitioners have learned that calomel may be given in successive doses, to the extent of a drachm, to very young infants; Dr. Hamilton increased the quantity to the amount of three drachms, and others have given three times this quantity in croup and obstinate cutaneous diseases of very young infants. I have invariably observed that mercury administered to the mother or nurse will be conveyed through the breast milk, and effect the cure of the infant. I have seen many cases in my hospital and dispensary practice, in which the infants were the most enfeebled objects that could be imagined, but they began to improve in a few days after the mother had taken mercurial pill or calomel. A cure is in general effected in three or four weeks, but there are some obstinate cases which require the use of the medicine for two or three months and even longer. It is a common practice in foreign countries to prescribe the syrup of sarsaparilla for infants as well as mothers and nurses. They also use frictions with mercurial ointment, in the proportion of two grains daily while the infant is at the breast; and increase a grain every month after the infant is weaned. Mercury should be discontinued during dentition or teething, when the infant is griped, affected with convulsions or diarrhœa. When any of these diseases appear, it is to be treated in the manner described under its respective head.

The infected mother ought always to nurse the infant, and if she cannot, a healthy nurse ought to be selected, when circumstances permit, unless there are primary sores on the lips or tongue of the infant. It would, says Professor Capuron, be inhuman to compromise the health of a sound woman by giving her an infected infant to nurse.

It has been already stated, that an infant who has a primary venereal sore on its lips, or a chancre, will infect a healthy nurse, by causing ulceration or excoriation of the nipple or nipples. But unless the infant has sores on its lips or tongue, it will not infect the woman who suckles it. If the mother or nurse labours under ill-cured syphilis, the infant will not be restored to health, until the parent or nurse is cured. This is a valid reason why mercury should be given to the mother, and the greatest caution employed in the selection of nurses.

It is really astonishing to observe the speedy cure of infants affected with syphilis, after the employment of mercury in their cases, and also when there is reason to suspect their mothers are contaminated. The remedy cannot possibly do harm or injury either to mother, nurse or infant, when prescribed in doses appropriate to different ages and constitutions.

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SELECT LECTURES,

FROM

M. BROUSSAIS'

Course of General Pathology and Therapeutics;
translated and revised

By JAMES MANBY GULLY, M.D.

LECTURE IV.

—

Furuncular Inflammation—Pustular Inflammation.

THE prognosis of furuncular affection is easy, and is founded on the intensity of the affection, its propagation and dissemination. When a boil is inclined to reproduction, it seldom stops at one, especially if the individual has changed the climate he lived in, and passed from a cold to a warm one. In that case, successive furuncular inflammations appear for several months together, so as to exhaust the powers and keep up febrile movements that induce considerable emaciation; this fact I ascertained when practising in the army in the south of Europe. When the affection we speak of has become very intense and in a phlegmonous form, or has extended into erysipelas—and this depends on the individual predisposition, and the way in which it is treated—it may bring on phlegmasiæ and other occurrences, such as those diseased states cause; the prognosis is then to be similarly modified. The most annoying symptom in boils and anthrax is the pain.

As in erysipelas, the treatment should be, at the earliest period, stimulating; but it rarely happens that the patient is aware of it at that stage. The disease most commonly goes on to the isolation and expulsion of the core; topical applications may be used that aid its formation, but it is not until it has been expelled or withdrawn that the disease stops. Cauterization may stifle the inflammation in the early period alluded to: but if twenty-four hours be allowed to elapse, it becomes too late, and it then only remains to treat it with demulcents, or to incise, by which its existence is abridged: the latter is the best, when the boil contains several cores and approaches to anthrax: the incision should be longitudinal in slight cases, in a T shape if more severe, and crucical when most intense. If the relief is not hereby sufficient, a few leeches should be applied to the edges, and these should be afterwards covered with emollient and narcotic poultices, by which large eschars and loss of substance are avoided. Furuncular inflammation requiring this extreme treatment, is most usually observed in robust old men who live too well.

The tendency to the reproduction of boils has been said always to be owing to some gastritic affection: such is not, however, invariably the case. The capillaries of the skin themselves have sufficient vitality to generate and retain the inflammatory disposition and principle of irritation which thus shews itself at different points; and I have not unfrequently seen the treatment of gastritis applied to such instances, without success, when emollient and narcotic baths dispelled them altogether.

When this gastro-intestinal complication really exists, you will succeed by the baths mentioned, by a few bleedings if necessary, by cooling drinks and vegetable diet; but you must not think it necessary to give purgative mixtures, bitters, and anti-scorbutic plants; do not believe that you ought to stimulate the digestive canal by pills that cause an incessant mucous torrent. I pass over the fevers and other affections that anthrax may be followed by, because for the present I wish to keep one organ alone before you.

Pustulo—Scabious Inflammation of the Skin.
—This is the third form of cutaneous inflammation, and, like the preceding, is caused by all kinds of irritation and individual predisposition: the latter it is impossible to explain.

The characters of pustular inflammation of the skin are heat, itching, circumscribed redness, and an elevation of the diseased surface above the skin; on this elevation is a vesicle, filled with serosity, first limpid, then reddish, as in some kinds of erysipelas, with the difference that in the latter the vesicle is on an uniform surface, whereas in pustular inflammation it is situated at a varied distance above the surface, and in relief. The vesicle empties, or is emptied by scratch-

ing; the fluid coagulates and forms a crust: it frequently also shrinks without emptying. The itching is the common character of circumscribed irritations of the skin, and was formerly, and, by some, is still attributed to acrid, saline, and acid salts, or humours; but any irritation of the skin caused by substances in which no such salts or humours exist—titillation with a feather for instance—produces the same effect.

On examining the skin, the redness is seen to be superficial, and the inflammation does not penetrate so deep as in boil: the two inflammations may, however, be complicated.

The propagation of pustular inflammation is effected by the multiplication of the pustules: they do not become severally larger, but more numerous, so as sometimes to extend over a great surface of skin, in which case, as the inflammation of each pustule approaches that next to it, and is mixed up with it, a kind of erysipelas ensues, and may itself be followed by phlegmon: this, however, is rare in pustules that do not owe their origin to a specific cause. The dissemination goes on as in the preceding cases: the irritation is repeated and propagated in the mucous surfaces and the nervous system, whereby febrile action is generated.

The pustular inflammations of the skin are known by different names; the most common is that of *dartres*, when they are independent of any specific agent. In fact, *dartres*, are pustulo-scabious inflammations *par excellence**. They do not at all suppose an internal inflammation, nor any virus nor infection of the humours, and they may be induced by all the causes of cutaneous irritation. They are favoured by the inflammatory disposition accompanied with a lymphatico-sanguineous constitution.

Dartres have received various epithets, according to the degree of redness they exhibit, the thickness of the crusts, their situation, their moisture or dryness, their obstinacy, disorganizing powers, &c. I shall, however, confine myself to the description of the fundamental characters that should afford indications for cure, and to proving to you, that though *dartres* are really pustular affections, it by no means follows that all pustular affections have a right to the name of *dartres*. For the rest, they take various modes of proceeding, either spontaneously disappearing without propagation, the inflammation ceasing, and the skin returning to its functions, though left in dry condition and in a state of lymphatic congestion, exhibiting a wandering character, pass-

* After this definition, I can conscientiously make use of the word *dartre*, which is not traducible into English. With the French every skin disease is a *dartre*; and *dartre* is every thing relating to the morbid skin. I never knew an Englishman that could say what *dartre* really means.—J. M. G.

ing from one point of the surface to another, being obstinately fixed in one part—an instance of which is *mentagra* which is a local irritation kept up by local stimulation—or terminating sometimes by gangrene, from the excess of inflammation, &c.

Regarding their propagation, they sometimes go on with surprising rapidity, and if improperly managed, may become transformed into phlegmons, cause indurations, disorganizations, incoercible ulcerations, and even take on the cancerous character. It is then that dissemination occurs: if irritation did not previously exist in the viscera it is developed there. Particularly in the digestive apparatus, and as the internal vasculo-nervous tissues are endowed with more activity than the skin, the irritation may leave the latter and concentrate itself on the viscera, and a change of disease occur. When death takes place in consequence of pustular or dartsous inflammation, it is not by the skin that it arises, but by visceral phlegmasiæ, frequently mixed up with sub-inflammations, as may be ascertained by dissection. In the skin you find different degrees of thickening, of lymphatic congestion, of disorganizations, and sometimes the sequelæ of phlegmon. When the disease is in the scalp, having the name of *tetter*, the same appearances obtain after death, and the same characters in life; it is vain to multiply individual descriptions and varieties—the phenomena are always identical.

The prognosis is plain; it rests on the intensity of the pustular phlegmasia; the more this tends to propagation and dissemination, the more are the viscera rendered liable. In general we may say that the danger bears a proportion to the external inflammation, and the part the viscera takes in it. If the cutaneous phlegmasia suddenly ceases with a stoppage of copious mucous secretion, an internal irritation in the degrees of inflammation or sub-inflammation is substituted. Danger also arises from the skin itself, from the itching and burning that prevent all sleep and obstruct nutrition; there may likewise supervene on the sub-inflammatory shade thickening and impermeability of the skin, which becomes gorged with lymphatic fluids, whence a complete suppression of the transpiration, and disorder of the secretions and excretions, arise.

In the treatment of dartsous inflammations, antiphlogistics, local bleedings, general ones, if there is necessity for them, emollients, all kinds of demulcents externally; and internally a regimen suited to ward off super-excitation. The inflammation reduced and if the disease remains, though divested of its phlogistic character, it may be well to have recourse to topical stimulants or astringents: these are numerous, but the sulphurous preparations rank the first. In short, the greater the inflam-

mation, the more necessity is there to employ local antiphlogistics and emollients, and to guard the viscera from invasion by it. If while diminishing it in the skin, the inflammation increases internally, you must proceed with all speed to recal it to the exterior, and stay the progress it is about to make or has made in the viscera. Then after it has been sufficiently combated in both its situations, the indication is counter-stimulation, that artificial stimulation opposed to morbid stimulation. Should an obstinate irritation in the skin persist, the specific treatment then becomes necessary, and consists in proportioning the modifying agents to the degree of susceptibility of the organ, and not in applying any determinate formula, flower, root, acid or oxide, to each particular form of the cutaneous affection.

Thus it will be seen that stimulation is only proper to change and destroy the old inflammation when it has been already diminished to a certain point by demulcents and local evacuations. If this be attained, the inflamed point supports a stimulation which it previously could not have done, and which is effectually curative. This fact is undeniable; if you dispute it you give your adversaries room for insidious objections and opportunity of driving you into contradictions. In general, facts should be taken as they are found, and we must not confine ourselves to the consideration of a single order of phenomena: they should afterwards be studied according to the philosophical rule, not in a speculative but a practical manner. For in medicine we have two chief methods of philosophizing: one which considers the history of the science in order to follow in it the processes of the human mind, when occupied in the investigation and verification of the notions of which medicine is composed, and this is the philosophy of the history of medicine; and another, which by gradual approximations demonstrates the analogies and identities presented to us by an infinity of facts, and this is the philosophy of practical medicine, or of the life of the human body; this is the philosophy to which we now adhere, which if we do not, we shall be lost in a fatiguing system of empiricism, which multiplies objects like grains of sand, so that no human intellect can contain them. Wherefore are these approximations objected to when it is so evident, by comparing the means employed in the treatment of the affections under consideration, that they are all referable to the leading idea that I have just laid down: namely, that the inflammation once extinguished, and the irritability or nervous condition once combated simultaneously or successively by narcotics, we must next have recourse to stimulation, if the habit of vicious secretion persist, and this stimulation being effected by astringents, metallic salts and oxides, sulphurous preparations, caustics, in short by all the sub-

stances mentioned under that head in the *Materia Medica*, and to which appropriately made compression may be added? The main thing is to know when to choose the time and the degree at which stimulants are appropriate. To this must be added the precaution of keeping the irritated part from the contact of the air by warm clothing, and also that of not irritating the internal organs, so as to avoid chronic gastritis and enteritis, and not make people valetudinarian under the pretext of cleansing them. When the inflammation has become cancerous, or a scorbutic condition exists, you must not allow yourselves to be frightened with these words: the state in question is the consequence of ill-timed stimulation of the skin, and a depraved nutrition produced by an internal phlegmasia. If we can manage to reduce the disease so that it shall only occupy the skin, it may yet be stopped: wonders may be done in the treatment of cutaneous affections when the conviction is once attained that it is necessary to destroy the inflammation at any price; but in doing so avoid all empiricism. The most successful skin-doctors always follow the therapeutical plan I have laid down, and all the special treatises on cutaneous diseases advise the same; time and experience will show you that I am right.

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MEDICAL EDUCATION.

Evidence given before the Committee appointed to inquire into and consider the Laws, Regulations, and Usages regarding the Education and Practice of the Medical Profession. Part I.

[This Part relates to the Royal College of Physicians.]

The first witness examined was Dr. Hawkins (Registrar of the College), the only important part of whose evidence is, that though a statute was enacted in 1772, qualifying "any Licentiate of 36 years of age and seven years' standing," as admissible to an examination for fellowship, yet no licentiate has ever been elected under this law; Drs. Wells, Sims, Stanger, and others having been rejected on the putting of the motions.

The next witness was Sir H. Halford, from whose evidence we make the following extract and summary:—

Sir Henry—being asked the origin of the bye-laws of the College which restrict the admission into it almost exclusively to the graduates of the English Universities, although that practice is not according to the original bye-laws of the College—replied that he thought that practice had originated from the original connection between the Universities and the College. The first founder of the College, Linacre, established

lectures at Oxford. The successor of Linacre founded a College at Cambridge, Caius College, and there has been a natural connection between the University and the College of Physicians ever since.

54. Has the College any reason to doubt the legality of confining the choice of the electors to the graduates of the two English Universities, there being no mention of any such restriction in the Charter and the Act of Parliament confirmatory to it? I apprehend the College is convinced that it does not necessarily confine itself to the members of the Universities of Oxford and Cambridge; there is a certain preference of those members in the mind of the Fellows of the College, for they are people who have undergone a moral and intellectual trial in the Universities from whence they came, to which they are not subject at the foreign Universities. They are domiciliated at Oxford and Cambridge, but not at Edinburgh or Aberdeen, or any other University from whence they may come; and the reason, I apprehend, for the probation of ten years is, that those people who have not been so domiciled may have an opportunity of giving proof of their moral qualifications, as well as their intellectual ones. That is the reason of the preference of the members of the English Universities in the minds of the fellows for the election of licentiates into their body.

96. How do you account for licentiates having been admitted according to the statute on the proposal of the president, and none having been admitted under the statute on the proposal of a fellow? I know not any reason, excepting that on the proposal of a fellow the licentiate is to undergo an examination, on the proposal of the president he is not examined.

99. Did you exercise the privilege as president of recommending a licentiate for admission last year? No, I did not last year. I have done it within this last fortnight, and I will state fairly before the Committee that if I had seen a person of extraordinary eminence, who was entitled to that distinction, I would have done it last year.

101. Was not Dr. Wilson Phillip (the person you have selected for admission into the College this year) as celebrated for his discoveries in physiology last year as he is this year? I believe he was; but there was a controversy going on at the time with an eminent person with whom he was engaged—and perhaps it was better to let that be determined before he was proposed.

In answer to the question as to whether pains are taken by the College to inform itself of the course of medical education which the graduates of Oxford and Cambridge, soliciting admission into the College, have passed through; or whether they merely go through an examination into the three departments of physiology, pathology, and therapeutics—Sir Henry stated

that they were examined in two dead languages, in anatomy, physiology, pathology, and the practice of physic; but that the College did not require that they should have gone through any regular curriculum of study, nor that they should produce testimonials from professors of the course of lectures they had attended; nor to have attended any course of hospital practice; because if the candidate "is well acquainted with the theory of physic, it affords a good presumption that he will acquire practical knowledge in time." Neither is the candidate examined as to his knowledge of midwifery (though he is expected to know the diseases of women and children), nor upon the practice of surgery.

201. Have the bye-laws ever been suspended for the purpose of admitting a king's physician to be a fellow of the College? No; there was an instance, some ten years ago, of the king desiring to make a licentiate his physician, and he spoke privately to me, and said "You had better make him a fellow of the College." He was proposed by me as president, and was elected.

203. The preamble of the statute for the admission of fellows into the College by the president is this—"Quando quidem fieri potest ut inter permixtos numerentur viri quidam egregiis et de re medicâ preclarè meriti, quos statutum, nostrum de sociis in ordinem sociorum cooptari vetat." Was the principal point in which the candidate was one of the "egregii et de re medicâ preclarè meriti," that he was physician to the king? No; I beg pardon, I do not know that we have a more intelligent or able fellow of the College than this gentleman is. It might be so far a recommendation that he was a physician of the king. He was a physician of a considerable hospital at the time, and he had acquired a certain degree of eminence in the country before he came to London, and was living in the good esteem of the whole medical profession.

204. How did it happen that his qualifications had not already recommended him to attention, and occasioned his being admitted a fellow of the College by the exercise of the president's privilege? There might have been others who appeared to the president, short-sightedly perhaps, even more talented than that individual—elder men.

225. Does the statute of the College still exist that none engaged in the practice of midwifery shall be admitted as fellows of the College? Certainly.

226. Therefore none of the censors of the College, whose business it is to examine those who claim a license, can have a practical knowledge on the subject of midwifery? That does not follow; they have attended in their studies through the hospitals as well as others. It does not follow that they are ignorant of that; they have every knowledge of the *homine nato et non nato*. The

reasons the College gave, I presume, were satisfactory in the eyes of the Secretary of State, who referred it to the College.

231. Since, according to your own statement, midwifery forms one of the subjects of the examination of the College, would it not be desirable to repeal that bye-law which excludes from admission into the College any person engaged in the practice of midwifery? No, I do not think it is expedient.

232. Will you state your reasons? I think it is considered rather as a manual, and we should be very sorry to throw anything like discredit upon the men who had been educated at the Universities, who had taken time to acquire the improvement of their minds in literary and scientific acquirements, by mixing it up with this manual labour. I think it would rather disparage the highest grade of the profession to let them engage in that particular branch which is a manual operation very much. As to all the knowledge of the diseases of women and children, it is expected of us, and we hope we are thoroughly informed of them.

234. If the admission to the fellowship were restricted to those of good moral character and of good education, would it, in that case, tend to lower the character of the College? I think it would be better not; it has never been done. It has always been objected to. There is a sort of manual operation, a sort of surgical operation, with the practice of physic, which, we think, does not quite accord, and we are sure it is not necessary.

The whole evidence before the Committee agrees in the opinion that there should be an uniform standard of qualification, and a general Board for conducting the examinations of those about to enter upon the practice of the profession. The honours and the appointments should be afterwards distributed according to individual talent, merit, and experience. It may be perceived that the expense of becoming a surgeon in London is at present ample to the attainment of the highest qualifications, but from the over-reaching spirit of monopoly, neither the student nor the public receive an adequate return.

We may at some future time give an analysis of the evidence of the voluminous volume before us; but as the same questions were asked of all the witnesses, such repetitions occupy a quantity of space which Medical Journalists cannot appropriate to it. We have given a summary of the conclusions of all the evidence of the fellows and licentiates of the College of Physicians. All were reformers, but some few very moderate ones. But since the publication of the evidence, the College has repeatedly met on the subject of reform, as we have already informed our readers

[Part II. relates to the Royal College of Surgeons.]

The first witness examined was Mr. Guthrie, as President of the College; and his evidence occupies more than 80 folio pages. It is but justice to state, that he explained and defended the proceedings of the College with great ability. He produced a vast deal of documentary evidence to prove that the College acted in accordance with opinions of different chancellors, chief justices, and the most eminent barristers of the different periods to which he referred. It appears from his evidence that the College would have been much more liberal, if their charter allowed them.

The following occurs in the evidence of Sir Astley Cooper, Bart.:—

5506. What is the present expense of hospital attendance in London?—There are three classes: the first is the apprentice, who usually pays £500 or £600 to be boarded and lodged in the house of the surgeon to whom he is attached.

5507. Do you mean of the hospital-surgeon?—Yes. The second is the dresser, who pays £50 for the advantage of dressing for 12 months. The third is the pupil, who pays £26. 5s. to be considered as a perpetual pupil, but, in reality, to enter only for 12 months: because it was thought right to hold over him, if he did not conduct himself properly, the power of disposing of him at the end of the year.

5510. Would the £500 or £600 include the whole expense he would have to pay for the run of the hospitals?—No, he has to enter for lectures of different kinds besides.

5512. What is the minimum expense incurred by a surgical student studying in London?—As an apprentice, it would cost him £2,000 for the six or seven years of education, before he could embark in practice. That is about the sum which a man ought to calculate that his son would spend under such circumstances.

5513. What class of practitioners is it whose education would cost that sum?—A person designed to be a surgeon in London, a surgeon of an hospital in London, and a lecturer.

5514. Can you give the items of which that sum would be composed?—The board and lodging, if he be apprenticed, is paid for at once upon his entrance; that is £600. The going to Edinburgh would cost him a considerable sum, and the going on the Continent, according to my system of education, a further sum.

5515. Then the £2,000 includes the cost of the year at Edinburgh, and the year at Paris, &c.—Yes.

5516. Supposing him educated for a general practitioner, and in London, what would the expense then be?—I should say from £200 to £300.

5517. Including the expense of the li-

cense of the Apothecaries' Company, and of the diploma of the College of Surgeons?—No, I do not include those; but £300 would cover the whole, if he were a prudent man.

The suppression of irregular practice and empiricism would be a desideratum to the profession and the public; but as experience has shown the best educated men in society to be the greatest patrons of quackery, attempts at its suppression by legislative enactments might serve only to render it of greater importance. The charlatans of London derive great advantage from the opposition of medical men. It would, perhaps, be advisable to lay a heavy duty on secret medicines, and inflict, according to the offence, fine or imprisonment on those who practise under a false title and without due qualification; or, as Mr. Guthrie proposed, to make them take out a license for the destruction of their dupes, similar to that for shooting game. In this way, if the state should suffer in its members, it would gain in its revenue.

The regulation of fees is a subject which must be attended with extreme difficulty, as well in proportioning them to the experience and standing of the practitioner, as to the circumstances of the patient. On this account, much must be left to individual discretion; but it is essential to the respect necessarily due to men taking charge of human life, that they be paid in fees like gentlemen. The apothecary is at least as honourable a member of society as the attorney; and should, like him, be legally entitled to his fee. The present practice of charging for the quantity of drugs, for the most part needlessly forced upon the patient, is an abomination. In most cases the drugs are of mere fractional value, and though an attractive colour be given to the useless contents of the phial, on paying the bill, suspicion, disgust, and ill-will are frequently excited towards the medical attendant. Were the system of paying the practitioners an annual salary, instead of occasional fees, more generally adopted, it would tend much to harmonize the profession with the public. The following extracts, from the evidence of John Scott, Esq., deserve attention:—

6373. Ought the education of the surgeon and the education of the physician, to run *pari passu* to a considerable extent?—I think, throughout the whole extent, from beginning to end. No man ought to practise surgery that is not qualified to practise medicine.

6388. Is the distinction, undefined as it is, that is made between the two departments of practice, a useful one?—Yes, to attain eminence, in any particular branch, a man should devote a considerable share of attention to that branch.

6389. Though the education of the phy-

sician and of the surgeon should be the same, you think that science and practice will be brought to greater perfection if some professedly devote themselves to physic, and some to surgery?—Yes, after having each thoroughly studied the whole.

6390. Were surgeons and physicians to be united in one common profession, would not the public, unaided by any distinction of professional title, be able to discover who the parties were that were best able to operate, if necessary—and who to advise, as to the nature and treatment of any internal complaint?—They do so now; and I believe are equal to do so.

6391. Do you approve of the present constitution of the Council of the College of Surgeons?—No.

6392. What alterations ought to be made in its constitution; or, if you contemplate some general Board to superintend the whole of the profession, state your views upon that subject?—I think there should be an amalgamation of the three divisions under one superintendence.

6394. I consider that the science of medicine is one and indivisible, and that therefore it is proper to unite, in the way I have suggested, the Boards who examine upon it. It seems to be wrong that the physician should be examined only in physic, the surgeon only in surgery, and the licentiate apothecary only in medicine and pharmacy: They ought all to be examined on all the three subjects.

The feelings which the regulations of the College of Surgeons generate in the profession are thus plainly expressed by J. C. Carpue, Esq.

6722. To what sort of practice is a professional man required to confine himself, in order to be eligible as a Member of the Council?—I know nothing of the College; I am so disgusted with it altogether, that I have not been near it for many years.

6723. The following is the description contained in the bye-laws of the College:—“No member of the College, whose professional practice is not confined to surgery, shall be elected a member of the Council.” And again, “Any member of the Council that shall not confine his professional practice to surgery shall be liable to removal from the Council.” By reading over the list of the College, would you be able to say how many of the members actually come under this description?—There are ten thousand names to read over, and I am not acquainted with many of the members. There are 10,000 members governed by twenty-one.

6724. Would any come under this description if interpreted strictly?—I almost doubt it.

6728. But if they were to act strictly according to their own bye-laws, most of them would be found disqualified to sit on the Council?—Most of them I think.

Whatever differences of opinion may exist with regard to minor questions, there are certainly leading reforms in our medical institutions, the necessity of which the impartial reader of our report will at once admit to be of self-evident demonstration.

1. The abolition of restrictions of the College of Physicians in favour of the English Universities.

2. The demolition of the *imperium in imperio*, which the fellows have established in the mode of electing the members of their own body and their president.

3. The establishment of a Board of Examiners, whose members, chosen equally from the three departments of physic, surgery, and pharmacy, should investigate the candidates' knowledge of each, and leave to circumstances and his own discretion the choice that he would pursue in practice.

4. The equalization of the qualification of the three Metropolitan Colleges—London, Edinburgh, and Dublin; and the privilege to their several members to practise in any part of the United Kingdom.

5. The institution of annual examinations in each branch to which a student may profess to apply himself, in order to withhold his certificate when found deficient.

6. The limitation of hospital appointments to a certain number of years, so that experience might be diffused through the profession. The elections to be decided by merit, not by patronage.

7. The preliminary education to be tested by examination previously to the commencement of studies purely medical.

8. The professional attendant to be paid for his advice and skill, not for his drugs.

As the advantages which the public and the profession would derive from these changes scarcely admit of question, it is needless for the present to enter upon the discussion of their merits. We are prepared, however, for a further exposition of malpractices, and also the suggestion of remedies in detail when the important subject of medical reform will be debated in the legislature. The existing medical, like other corporations, are the strongholds of injustice and fraud—they must be reformed altogether. Institutions must conform to the times, or be overturned by the weight of that intelligence which is at present pervading and penetrating society to its depths.

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DUPUYTREN'S CLINIC.

Cysts, with Osseous Walls, developed in the Bones.

M. DUPUYTREN has more than once called attention to this disease, which he was the first to describe accurately. If fibro-cellular tumours, he observes, are very frequently developed in the soft parts, and especially in the

walls of the uterus, similar tumours may also occur in the substance of the bones. A contusion—an injury of any kind, may implant the germ of these tumours; and when once their birth has taken place, we can have no difficulty in understanding their growth. They are united to the surrounding parts by a peduncle, through which they derive nourishment and life. Their growth is the consequence of the nourishment thus afforded; and the increase of size causes the layers of bone to separate. But though we readily conceive that a *solid* body interposed between the bony plates may, by its progressive increase of size, separate the layers, and distend them to an indefinite degree, it is less easy to understand the development of cavities containing only a *fluid*; and especially how this fluid can act so forcibly as to distend the substance of the bone. Such, nevertheless, is the fact. I have observed numerous examples, either in the extremities of the long bones, in the bodies of the vertebræ, or more frequently still in the bones of the face; as in the superior and inferior maxillæ.

The matter contained in these cysts, we have already observed, is either solid or fluid. The following is a very remarkable instance of the first.

CASE I.—Osseous Cyst, containing a Fibro-cellular Substance.

It is now twenty years since a young man presented himself at the Hotel Dieu, with a voluminous tumour of the right horizontal branch of the inferior maxillary bone, elevating the cheek. He had been educated with a view to the ecclesiastical profession; but on account of this deformity he was refused admission. M. Dupuytren carefully examined the tumour, and satisfied himself that it was situated in the bone itself. On pressing the tumour, which had an oval form, he perceived a slight crepitation, such as occurs when paper is crumpled between the fingers, or, better still, on crushing a piece of very dry parchment. The perfect conviction he had acquired of the existence of a cyst with bony walls; the absence of any lancinating pain, or fungous excrescence; the youth and perfect general health of the patient, and his ardent desire to be relieved of a malady which presented an invincible obstacle to his profession—all determined M. Dupuytren to operate, and convinced him that he had not an osteo-sarcoma to deal with.

The angle of the mouth, on the right side, was freely divided; and the incision was continued along the body of the inferior maxillary bone. A similar incision was also made in the inside of the mouth. The osseous cyst being penetrated, a little reddish-coloured serosity spurted out, and a fibro-cellular mass was perceived, and partly extracted by the aid of forceps. Suppuration dislodged the

rest; and by means of repeated injections, a cure was soon obtained. The sides of the cyst gradually approached each other; and there remained but a trifling deformity—a little elevation, and slight cicatrix of the skin.

We shall now relate two very curious cases of the second class of osseous cysts—those containing liquid matter.

CASE II.—Cyst with Osseous Walls, containing a Sero-sanguinolent Fluid.

About three months ago, the sister of a physician in the neighbourhood of Tours, a lady between twenty and thirty years of age, came to consult M. Dupuytren for a tumour, of the size of a hen's egg, in the right horizontal branch of the inferior maxillary bone. The patient believed herself to be affected with an incurable malady—an osteo-sarcoma. M. Dupuytren examined the tumour; and the absence of any symptom of osteo-sarcoma, such as lancinating pain, varicose, degeneration, &c. joined to the crepitation which was distinctly perceived on pressing the walls of the cyst, induced him to encourage the patient with better hopes of the issue of the disease. Delighted with the hope which the surgeon gave her of being cured, the young lady earnestly entreated the performance of the operation which he told her was necessary.

The tumour projected more into the mouth than externally; and pushed aside the tongue. It appeared to have arisen from the incomplete extraction of a carious tooth. An incision was made within the mouth, along the side of the tumour; and on the latter being opened, a great quantity of sero-sanguineous fluid was evacuated. At the bottom of the cyst, a solid mass was perceived; and on drawing it out, it was found to be perfectly analogous to adipocere. It was, in fact, adipocere, and probably arose from the transformation of particles of animal food, which had found their way into the cyst through the socket of the tooth which had been drawn. Injections, poultices to the cheek, venesection, and low diet for a few days, effected a cure. No tumour or deformity remains.

CASE III.—Osseous Cyst, containing a Sero-purulent Liquid.

The success of the case last mentioned, brought to the Hotel Dieu, shortly afterwards, another young female, affected apparently with a similar malady, and expecting, not unreasonably, a similar cure. The tumour, oval in shape, and as large as a hen's egg, was developed in the substance of the left ascending ramus of the lower jaw. Its growth had been slow, without lancinating pains, without fungous excrescences, and without change of colour of the skin. The tumour projected most internally; and its position required a difference in the mode of

operating. As in the other two cases, the existence of crepitation was at first very evident. Many persons perceived it; but repeated pressure of the tumour by a great number of hands, caused it to disappear. M. Dupuytren, sure of having perceived it, attributed its disappearance to its thin sides being forced in upon the contained parts, in consequence of the frequent contact it had sustained.

When the patient was brought into the theatre, a new examination confirmed the results of the previous ones. Even the crepitation which had been absent for a time, again became manifest; owing, no doubt, to the elasticity of its sides. An incision, about an inch in length, was made along the posterior border of the masseter muscle, commencing a few lines below its middle, in order to avoid injuring the vessels and facial nerve, and continued to near the angle of the jaw. The lips of the wound being held apart, the tumour was seen and felt, covered by a membrane which M. Dupuytren was induced to believe was of a serous description, and which to the touch was soft as velvet. No inequality or excrescence was perceived on the tumour; the surface of which was every where smooth and regular. In form and volume, as nearly as could be judged, it resembled an egg. A stroke of the knife then divided the anterior wall of the cyst, upon which a sanguinolent serous liquid flowed out in abundance. No solid substance was discovered. A tent was introduced between the lips of the wound, in order to prevent union. Repeated emollient injections into the cyst were ordered to be made; a poultice to be applied to the cheek; and bleeding from the arm to be practised—provided (which did not, however, appear probable) this simple incision of the soft parts and of the tumour, should give rise to any general or local symptoms, sufficiently violent to demand active measures. If, when suppuration had taken place, the pus should collect, and the opening already made should not be sufficient for its discharge, a counter-opening was ordered to be effected, at the most depending part; and that is the worst the patient need anticipate for obtaining relief from a malady, which she long thought incurable; and of which, probably, in one or two months, scarcely any traces will remain.

Since the operation, no unfavourable occurrence has taken place. Thanks to the introduction of the tent, the wound has continued open; and whether in consequence of the repeated injections which have been made, or of the irritating contact of the air, or of both causes combined, the interior of the cyst is suppurating abundantly. At each injection the water which first leaves the syringe, is returned thick and loaded with healthy pus; but at last the water returns clear, and the cyst is completely emptied. Slight redness and swelling have appeared in the cheek,

about the circumference of the opening. At present this redness is not alarming; not being of sufficient intensity to make us dread the supervention of erysipelas. The patient feels pain more or less severe in the cyst; and the distance of the sides appears already to have somewhat diminished. M. Dupuytren is determined not to employ any artificial means of compression to bring them together. The situation of the tumour, indeed, ought to suffice for this. Pressed on one side by the pterygoid muscles, and on the other by the masseter, it can scarcely be doubted that the forcible and sustained action of these muscles, joined to the suppurative inflammation in the interior of the cyst, will bring together its sides, and will efface all deformity, except that arising from the cicatrix of the wound, which the position of the tumour rendered it necessary, should be made externally.

The cases which we have just detailed, have given M. Dupuytren an opportunity of insisting on the diagnosis of tumours of this kind; and in particular of establishing the marked differences which exist between these tumours and osteo-sarcoma, with which a superficial examination may confound them, but from which it is nevertheless so important to distinguish them. Osteo-sarcoma, he observes, is attended from the beginning by lancinating pains, by varicose tumefaction, by fungous degeneration, and by numerous inequalities. In these tumours, on the contrary, the surrounding parts do not participate in the malady; the surface of the cyst is smooth and regular, and its growth is indolent. Osteo-sarcoma is developed quickly, the increase of these tumours is much less rapid. Osteo-sarcoma is traversed internally by splinters and fragments of bone; such fragments are never found in tumours of the other kind.

As to the crepitation we have described, which is never observed in osteo-sarcoma, and which is a symptom almost pathognomonic of the tumours in question, it greatly resembles, says M. Dupuytren, that which I have observed in those tumours of the hand which are divided into two parts, by the anterior carpal ligament; one part being anterior or inferior, and the other posterior or superior. There is this difference, however; that in the case of the latter, the crepitation is owing to the shock, which the tumours when displaced receive, on striking each other.

**EFFECTS OF THE NEW POOR LAW ON
THE MEDICAL PROFESSION.**

—
“Homo sum humani nihil a me alienum
puto.”
—

*To the Editor of the London Medical and Sur-
gical Journal.*

SIR—Well knowing the spirit of philanthropy which breathes in your every effort to advance the interests of the community, so far as it relates to the advantages which medical science is capable of conferring, as well as your equally laudable exertions to maintain, unimpaired, the rights, and to promote the interests of the medical profession, allow me, through the medium of your scientific and ably conducted Journal, to make a few observations on the provision made for the *sick poor* under the new poor law amendment bill. It is not with the legislators of this measure that I would complain, but rather on the other hand I would willingly give them credit for the best intentions in the formation of it—having done so much in the cause of reform as they have—and I rather believe that the majority of observing men will admit the principle of the bill to be good, so far as its proclivity goes to re-establish that praise-worthy independence which existed amongst the once happy peasantry of this favoured land, the partial, or utter extinction of which salutary feeling, all must deeply regret, though this state of things is referable in a very great measure to the mal-administration of the poor laws under the old system; but it is with those who are authorized to carry the various principles which this measure embodies into execution, that I would remonstrate; and more particularly as it relates to the provision that they are making and ostensibly intend making generally for the sick poor; with these intentions there is justifiable cause for complaint, notwithstanding its being admitted that those who have given the slightest attention to the administration of the poor laws, must long since have been convinced of the necessity of some change in the law, which had for its object a due provision for the poor, but bearing in mind that the abuse of the best thing is the worst; hence in effecting this desirable change, no barbarity or inhumanity of feeling should have been developed—no, not even should there have been any thing approximating to a pathetic indifference manifested in any provision it may be necessary to make for the relief of the *afflicted* poor; but this unhappily has been done; and the question I ask is, why, in the making of such a provision, should an act of the grossest injustice be done towards the suffering poor, and the stamp of degradation sealed on the medical profession. Philosophers, from the earliest to the latest periods of our history, have at-

tested that the study of medicine is the most abstruse, noble, and dignified, that can engage the mind of man; and that to be able to practise it successfully, it must be known scientifically, and to acquire this knowledge is no easy task; there must be brought to it unceasing study, unremitting application—yes, the medical man, to be a medical man, in the strictest acceptation of the term,

“Must toil by day, by night that toil repeat,
And yet, alas! what mighty fruit he gains,
A beggar's harvest glean'd by mighty pains.”

And is it not then, allow me to ask, Sir, a degradation to the medical profession, to give its members that may be called upon, or selected to attend the sick poor, a very far less salary than those who have to discharge irresponsible duties in comparison with those of the medical man; and it is alike degrading that the sick poor should be marketed out in the way as it is ostensibly the intentions of these poor law commissioners to do: for the suggestions and opinions of the persons called guardians are subservient to those of the commissioners; and the guardians, too, are selected from the immediate neighbourhood, and consequently more cognizant of the wants, and more conversant with the feelings of the poor. We find that medical tenders are advertised for, for several unions and respective districts, situated in unions of too great an extent to be attended by one medical man; but be it remembered, that the places so situated as to require the dernier resort of advertising for medical tenders, are generally those where the resident medical men have in a body indignantly refused the terms of remuneration proffered by the poor law commissioners, justly concurring as they do in the supposition that it would be most unprincipled conduct on their parts, and such as would engrave indelible disgrace on their characters as medical men, to accept of an altogether inadequate remuneration, for the length of time they would be called upon to sacrifice, the supply of medicines, &c. which an attendance on the poor would necessarily require of him. But what has been the consequence of this justifiable indignation on the part of medical men, in some places? Why, a mere adventurer has been introduced by these poor law commissioners, and perhaps without even a very *strict* inquiry as to his eligibility to discharge the duty of medical attendant to the poor; and what were the conditions or terms offered by these sub-administrators of the law to the resident medical men in many places? Why! ye gods, will ye believe it! Two shillings per head; and the best terms that could be made with them were two shillings and sixpence, not for the pauper poor as a body—for then, by putting the healthy in the balance against the sick, the thing would have been somewhat equalized;—but no, for the sick poor only

and these not to exceed a certain number in each parish—to use a paradoxical phrase now prophetically short-sighted—to decree the number that are to be sick. I presume it must be thought that we have no such things as epidemics, or that we are to be henceforth entirely free from them. So that if the sick in each parish exceed the stipulated number, those over and above such number the medical man must attend gratuitously, if it may be so called in contradistinction to the stipulated number that would, with *such terms* of remuneration, receive an attendance scarcely a remove from the gratuitous. And why should the medical man be expected to labour gratuitously? Would it not be as rational to expect a clergyman to attend to the spiritual wants of his parishioners without an adequate compensation? There would be quite as much justice in the one as the other. But is it, I would inquire, possible for any man duly to attend poor creatures resident five or six miles from him, requiring daily attendance, perhaps for weeks; and by way of illustration, we will say labouring under enteritis, gastritis, cerebrites, pulmonic affections, &c. or any of the other formidable ills human nature is daily liable to? And I would hope that there is not a human breast that would have the hardihood to deny the beneficent, the assuaging, the truly charitable protection which medical science so extensively affords to society against some of the severest of human calamities. But how can this protection be rendered available to the poor; for it is utterly impossible for any medical man to do justice to the poor so distantly situated, for the despicable remuneration of two shillings and sixpence for twelve months' attendance, should the patient require it. Hence the deduction that the poor wretches must in many instances be necessarily consigned to fate; and in the majority of cases a painful fatality would attend the consignment. And could we bring before our view Hamilcar offering a solemn sacrifice to the sanguinary divinity of Carthage, he could not have enjoyed a higher degree of exultation over his human victims, than the providers of such means for the alleviation of the sufferings of the afflicted poor may boast of. Let the poor but honest man be asked, what description of parochial assistance he most appreciates, and he will tell you unhesitatingly, the "medical;" and it is not inhuman nature to suppose that he will tolerate the deprivation of that which he prizes so highly, "sub silentio;" and the daily accounts we have through the medium of the press, afford incontestible evidence of this fact, as well as the great difficulty there will be of carrying the principles of the new poor law amendment bill into full operation. And why do these sub-administrators of the law thus exert themselves to create a rebellious and disaffected feeling in the minds of

the poorer classes? It is said that a noble peasantry is a country's pride; but as it relates to England, I fear the saying will not be strictly applicable, ere long, if the ruling powers exhibit an indifference to their necessities—for the old adage is "*insita hominibus natura violentiæ resistere.*" Let us no more boast of our national philanthropy in voting away twenty millions of our money for the abolition of slavery in our colonies, when too it was matter of conjecture with many of its warmest advocates, as to whether those to whom the boon was given, were sufficiently advanced in a state of civilization to be enabled fully to appreciate the blessings of freedom—let us, I say, not boast, if we have effected this good at the expense of putting our own poor in a worse state of bondage; for freedom is next to being useless, if the free poor are deprived of the means of existence. Life is valuable, but health is still more so, and more particularly so to the poor. But what shall be said of the feelings of the poor; words are inadequate to express them when their health is invaded by disease, and they are without claim to that aid which has for its grand object its removal or alleviation. Let them not be deprived then of that friend, who is the friend of the destitute, who by his unwearied attentions smooths the pillow of the dying, inspires the desolate with hope, and whom the hollow eye turns to behold as, and the haggard lip to pronounce as, the dispenser of good. But it may be said that they cannot suffer from such a deprivation, while hospitals, infirmaries, dispensaries, &c. are so numerous; but let it be remembered that these are not in every place; and it is much to be regretted that they are not more abundant. Would it not, allow me to suggest, have been advisable, in the absence of a better provision, and leaving the medical man without a *fixed and a fairly remunerating* salary, to have introduced a clause in this new poor law amendment bill, enforcing the formation of a self-supporting dispensary in every place having a certain number of inhabitants, to which the poor should contribute according to their means; and if they had not a mite to contribute, let them not on that account be deprived of its advantages? To such institutions there always are many honorary subscribers; and let each parish be obliged to contribute a sum annually towards its support, in a proportionate ratio with the amount of its pauper population; let the medical men resident in the place attend on fixed days in turn, if they pleased, and receive an equal and fair remuneration out of funds so raised, for their time and labour. But I will not pursue the subject farther, but consign it to abler hands, having already trespassed at too great a length on your valuable pages; but the importance of the subject must be my excuse. We will hope better things; and trust that there is

not a government so callous or insensible to the ordinary impressions of humanity, or that could so brutify and drown feeling, as to weaken the gigantic strength of a nation like Britain, by a cruel perpetuation of disease amongst its poor.

I am, Sir, yours respectfully,

A constant reader,

June 3rd, 1835.

MEDICUS.

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Reviews.

The Cyclopædia of Anatomy and Physiology.

Edited by Robert B. Todd, M.B., Lecturer on Anatomy and Physiology at the Westminster School of Medicine, &c. &c. Part I. Royal 8vo. pp. 112. Illustrated by numerous engravings.

This work is intended to comprise the sciences of anatomy and physiology in the largest sense, as regards the animal kingdom. It will contain human and comparative anatomy and physiology, with animal chemistry. It will also include surgical and morbid anatomy.

It is the first work of this description that aspires to embrace in the most comprehensive sense the anatomy and physiology of the animal kingdom, with the general surgical and morbid anatomy of man. That great merit is due to those who conceived the plan of this work, no one will deny, and that still greater praise will redound to the editors and contributors, we entertain not the slightest doubt. Dr. Todd's *Cyclopædia of Anatomy and Physiology*, from the splendid array of literary and scientific talent engaged in it, comprising many of the most distinguished names in this country and in France, cannot fail to become a work of reference and authority.

The manner in which it is got up is very creditable to the publishers, whose high respectability ensures a similar continuation throughout the work.

It is however to be regretted that vegetable physiology is not included. Had this department of science been embraced, the work would be much more perfect than in its present form. Again, it excludes medicine, surgery, obstetrics, or legal medicine.

Dr. Todd's article on the Abdomen, which is graphically done in an anatomical point of view, occupies nineteen pages and a half.

The same article in the *American Cyclopædia of Medicine and Surgery* extends to thirty-eight pages; the physiological considerations relative to the abdomen a page and a half, the symptomatology nearly three pages, the pathology nearly forty-three pages. The one article fills twenty, and the other eighty-six pages. It may be said, in reply to this comment, the works are different, and therefore it is not fair to institute a comparison between them. We rejoin it is fair; because the description of the anatomy and physiology, without the pathology and therapeutics, renders the arrangement of the one much more complete than that of the other. As anatomy and physiology are the basis on which the superstructure of sound and judicious medical practice is based, the latter ought to have followed the former.

In recording these sentiments, nothing is more foreign to our intention, than to depreciate the merits of the work before us, as we really think that this part is most ably executed; and if the future numbers be as good, the work will be a most valuable one on the subjects of which it treats. We use the subjunctive mood here, as it may happen, as it did with another work of a similar kind, that some of the articles may be miserably executed. We do not however think, looking at the list of contributors, that this is likely to occur; because every one of them possesses sterling talent.

The first part was published on the 1st instant, and another will appear every other month until completed. The work is very well printed on superfine paper, double columns, and will be completed in about twenty parts. The writers in this part are Dr. Todd, Dr. Bostock, Mr. W. T. Brande, Mr. Owen, Dr. Cragie, Mr. B. Phillips, Dr. Coldstream, Dr. Symonds, Mr. T. Bell, and Dr. Grant.

Time does not allow us to analyse the articles in this part at present, nor are such the most interesting to the majority of our practical readers; but we shall, when our space allows, give extracts from this valuable work. It promises to be the most comprehensive system of human and comparative anatomy and physiology in our language. The descriptive anatomy is exceedingly minute, and the physiology

brought down to the present day.—The work well deserves a place in every medical library.

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The London Medical

AND

Surgical Journal.

Saturday, June 13th, 1835.

TO OUR SUBSCRIBERS AND PROFESSIONAL BRETHREN IN GENERAL.

WE are now enabled to offer our grateful acknowledgments to our professional readers, for the warm support they have given us, and for the consequent extensive circulation of this Journal. They have as we expected, with one or two insignificant exceptions, advocated the course we pursued in refusing to fill the pages of a medical periodical with puffs about humbugs who assume the titles of our faculty. Fearless of the St. John Longs, the Ramadges *et hoc genus omne*, and regardless of the sordid meanness of men with whom it was our misfortune to be associated, we advocated and upheld the respectability of our profession, and never would prostitute our pages by lauding unprincipled and ignorant pretenders to, and unblushing dabblers in medicine. Our brethren could not fail to support us in this refusal.

It has ever been our main object to uphold the dignity, respectability, usefulness, and rights of the qualified classes of the cultivators of the healing art, convinced as we are that no other class in society contributes so much to human happiness. Actuated by this conviction, we have exposed the knavery of rash unprincipled quacks, who would impose upon the credulity of the world by pretending and professing to cure incurable diseases, and the degrading folly of their abettors. We directed the finger of scorn towards those who proclaimed, "Cancers, consumptions, and other incurable diseases, cured here." We too annihilated

cholera hunters, and their horrible quarantine, the offspring of dark ages and the fell destroyer of all the tender ties of humanity—we stood alone as non-contagionists from the first appearance of the cholera in 1831, when the Metropolitan Board of Health, not one member of which had seen a single case of the disease, were fighting the isle from its propriety; when the Medical Societies of the metropolis proclaimed contagion; when in consequence of this gross ignorance, fathers were to be separated from their children, and every tie of nature broken asunder in all this storm of ill-founded prejudice—we stood alone as non-contagionists. The disease appeared in Paris, and those affected with it were admitted into the hospitals—an advantage universally denied in London, with the exception of the Free Hospital in Greville Street. The physicians and surgeons of Paris, after the most ample and painful investigation, unanimously declared the disease to be non-contagious—Here was a triumph for us! We exclusively published the conclusions of the Parisian faculty, when lo! our Board of Health, Medical Societies, and cholera hunters, high and low were confounded. The public press universally promulgated this result, the contagionists became non-contagionists, and in 1832, when the cholera re-appeared, the public was freed from the egregious bug-bear of inexperienced Boards of Health, and the inhuman law of quarantine—"Here we did the state some service, and well they know it." Those we exposed became our enemies. One unjustly titled medical practitioner declared he would give five pounds for a rope to hang us; another fought hard to have us summoned before the College of Physicians for our delinquencies; a third proposed to erase our name from the roll of their College of Surgeons; a fourth thought to influence the Privy Council and persuade them that we had libelled the

government, and that his Majesty's Attorney General should proceed against us. All these sage counsels were however found impracticable; it was felt "that truth was great and will prevail." We defied and escaped all the myrmidons of power and stupidity.

We did not however escape the advocates of quackery. They brought us into a court of law, and through the instrumentality of a juror (who was expelled the court as an attorney for wilful and corrupt perjury), succeeded in amercing us in heavy damages. The profession, however sympathised with us; the independant part of it, assisted us in liquidating a demand incurred in their defence, and the result was a vast increase of support in subscribers to this Journal, and a great addition to our practice. Steady in the pursuit of the even tenour of our way, we refused to prostitute our pages to lauding quacks and impostors on the public. We were so incessantly urged by those whom we had the misfortune to be associated with, that we were compelled in defence of our own respectability, and the dignity of the profession, to dis sever our connexion with them. We then started unshackled, secured a host of talent for this journal, and by the generous intervention of those who held our former pathway to be the true one, we arrived at our present position.

To improve this as well as to improve the value of the periodical, to those who have up to this time supported it, we propose to enter upon a series of coloured plates, which while it will adorn the Journal, will also save our subscribers the expense of other and more costly though less finished productions in separate publications.

We are now enabled to state without doubt, or the possibility of failure, that we shall enrich this periodical with a series of highly executed coloured engravings on medical botany, diseases of the skin, and morbid anatomy.

The drawings on medical botany

have been made by a celebrated botanical draughtsman at the Chelsea Garden, and represent the plants mentioned in the British Pharmacopœias.

Those on diseases of the skin we have had executed from the splendid plates of Baron Albert, M. Rayer, Dr. Willan, Dr. Bateman, and others.

The series on the extensive field of morbid anatomy have been collected from various sources, and we now invite contributions from our contemporaries throughout the kingdom.

It has often been a source of great regret to us, that we were not allowed on former occasions to make this offer, and this arose from the opposition of our late partners.

We shall give a plate every fortnight without any additional expense, to our readers. We commence with medical botany, and shall, so soon as we have executed a sufficient number of plates on diseases of the skin and morbid anatomy, give these also in alternation. Thus we shall give twenty-six highly coloured and executed plates every year with this journal, for one pound six shillings, though the plates alone would cost double the sum. We expect that the addition of plates, to the variety and excellence of our matter, will obtain a patronage and circulation for this work never possessed by any medical publication in this country. We enlarge the sphere of usefulness to every member of our profession, by enabling him to contribute drawings and morbid appearances to the records of medicine. We shall commence the publication of the plates almost immediately, and continue them every fortnight, without the possibility of failure.

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It appears that the French minister of public instruction has reserved to himself the choice of those who are to fill all the medical chairs that shall hereafter be formed by the government, thus throwing overboard altogether the election by concours. Though no friends to the concours as it is practised in France, we are still less inclined to

stand by the choice of French ministers, who are notoriously the most inveterately and unblushingly jobbing of their species in Europe.

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LITERARY MERITS OF OUR HOSPITAL SURGEONS.

WE promised in our last to continue the critique of M. Baumes on the state of surgical science, as demonstrated in the hospitals of our metropolis. In accordance with that promise we proceed to quote his remarks on the questions, "What are the leading works on surgery that have been published by the London Hospital surgeons since the period of M. Roux's account?" and "In what degree have they aided the progress of science?"

"At that period Sir A. Cooper had already published the best and most original of his works, that on Hernia. This work is well known, and has been properly appreciated for a long time. His other researches, published about the same time, or since, and whose subjects are Luxations and Fractures, the Diseases of the Breast, of the Testicle, and a few others, though highly interesting on the score of pathological anatomy, are by no means equal to his first work, in really novel matter. The surgical talent of Sir A. Cooper is far above all the surgeons, old and young, that the London Hospitals contain, and he has justly taken a place among those who since the commencement of the passing century, have assisted in the progress of surgical knowledge.

"Mr. Lawrence had also written, at the date of M. Roux's journey, his Treatise on Hernia, and the latter gentleman has justly eulogised it as a work of method and erudition. And indeed this is its principal merit; and it was no small merit at that time, when positive data on the subject of hernia were as yet nowhere collected together so as to exhibit a co-ordinate system for the guidance of the student, and the instruction of the practitioner.

"Since then, Mr. Lawrence has written a Treatise *ex professo* on the Syphilitic Diseases of the Eye; and in 1833 a voluminous work on all the Diseases of that organ. It would be difficult to prove that these works have really been any gain to science. In fact we have been so supersaturated, before and since the

writings of Beer, with infinite divisions and subdivisions of the diseases of every part of the eye-ball, that authors would do well to drop the subject, unless they have something really useful and directly applicable to practice to communicate.

"Mr. Travers, of St. Thomas', has written nothing particular (*n'a pas écrit grand' chose*) in surgery since his *Researches on Wounds of the Intestines*, and the separative process of nature in them. The spirit of surgical observation he then shewed has since remained in an almost absolute state of sterility.

"Mr. Guthrie is known by his works on the Pathology and Surgical Therapeia of the Eye, and particularly by his interesting observations on Gun-shot Wounds, and the lesions that require amputation. But in his work on the Diseases of the Urethra, and Neck of the Bladder (1833), he has not shewn himself equal to the progress which this subject has made in other countries. Does it not shew him, for instance, to be behind-hand, when in speaking of cauterizing strictures, he brings against that method objections that are purely applicable to Home's process? The latter ignorant and dangerous proceeding is far different from that proposed by Ducamp, and from all the improvements since wrought in the operation. This part, therefore, of his Treatise, in which however he seems to regret the universal proscription of the cauterizing plan in London, is utterly incomplete, and scarcely one objection is advanced which is not either founded on false data, or which might not easily be overruled. All that he states, too, on puncturing the bladder by the rectum, and of the operation of puncturing the perineum in retentions of urine from contractions of the urethra, seems to have been written previous to the progress that surgery has made in latter years. M. Roux made some very just observations on the frequency of this operation in the London Hospitals, and since that time things have undergone no change.

"Sir Benjamin Brodie, whose name was among those that promised a brilliant career in the science and literature of surgery, has not equalled his promises as a surgeon and original writer; but as a fully occupied practitioner, he holds the surgical sceptre in the rich and aristocratic classes. A long time

age he published some Remarks on White Swellings of the Joints, which M. Roux considered very ingenious. At a later period he published a volume on the Diseases of the Urinary Passages, a fourth edition of which has recently appeared. Unfortunately he may be reproached—and such is the opinion of English surgeons that are capable of judging—with not keeping progress with the march of knowledge regarding the diseases of those important organs concerning which the last fifteen years have thrown so much light. His book is a kind of familiar conversation between a teacher and his pupils, wherein the former explains to the latter his own mode of practice, without bothering himself or them with what others think. He does not say a word on the history, the advantages and modes of proceeding in cauterizing; scarcely a word on lithotomy: very little more on the internal or medical treatment of affections of the bladder: nothing at all on the different kinds of lithotomy, except that which he himself employs. But, *en revanche*, he dwells at great length on the importance of not making too large an incision in the prostate, and particularly of not involving what he calls the cellular capsule that surrounds it, because it is an obstacle to urinary infiltration; and on the consequent advantage of gently dilating this moderate incision with the gorget on the fingers, &c. &c. This is his own plan of operation, and his professional brethren assert that he has less success in the operation than is obtained in the other metropolitan hospitals.

“ Mr. Mayo, except some Observations on the Diseases of the Rectum, has been mostly engaged in anatomical and physiological researches. But his last works, though not devoid of merit, sink before those of Sir Charles Bell.

“ Sir. C. Bell has not been so happy or so rich in his surgical productions as in his physiological discoveries. His works on the great operations of surgery, on the lesions of some parts of the osseous system, on the diseases of the urinary organs, though they exhibit the observing spirit and profound anatomical science for which he is distinguished, yet present nothing that is new, nothing that bears the stamp of originality possessed by his other writings. Being a talented and tasteful draughtsman he has abused his pow-

ers, and accompanied all his works with plates that are frequently more expensive than useful. For the rest, this abuse of plates is common to many of his confreres, with the difference that their engravings are sometimes worth more than the text. Bell is a man of simple tastes and far from wealthy: he is a man of genius, and it may be added, is neither understood nor appreciated by the majority of his hospital confreres.

“ There have also appeared some Memoirs by Mr. Key, on the modifications of the prostatic incision in lithotomy: of Mr. Arnott, on the Diseases of the Urethra, on a mode of dilating it with air, &c.: of Mr. Scott on the Application of Compression to Congestions of the Joints, an idea that is not novel, &c. &c.; but without refusing all merit to these surgeons, we must say that no original idea, no fundamental thought, on which inferences of any consequence could be founded, or which could assist in advancing the science, are developed in their works.

“ It may therefore be laid down as a fact, that no publication really out of the common order has issued from the London hospitals during the last few years. And this is also the opinion of those that are engaged in collecting all the discoveries of the art in England, and particularly of Samuel Cooper. This at once erudite and modest man told me, that meeting one day at an hospital with a surgeon who has since risen into great practice, the question was broached, whether any young surgeon could be found actually in office in the hospitals, on whom any justly brilliant hope could be grounded? and that after much consideration they could produce no name that answered to such a hope.

“ The rebuke that may be most generally addressed to the London hospital surgeons is, that they are ignorant of, and careless about what is passing in other countries; that they do not adopt what is really worthy of adoption, out of their own country; or that they make such frivolous trials of it, as to be induced early to abandon it and pursue their old track; and that they testify, in short, an unwillingness to acknowledge any utility in methods the advantages of which are everywhere else acknowledged.”

DR. GOLIS'S TREATMENT ON THE DISEASES OF CHILDREN.

We are indebted for the following long but valuable article, to the *Gazette Médicale*, of the 25th October 1834, and the 31st January 1835. It is an account of the practice of that distinguished physician, Dr. Gölis of Vienna, in the diseases of children, and was drawn up by Dr. Brosius, his pupil. We copy it from our contemporary, the *Medical Quarterly Review*.

Inflammatory Diseases.—According to Dr. Gölis, two thirds of the diseases of childhood are inflammatory; stimulants must therefore be administered but sparingly, and we must often confine ourselves, especially when the case is doubtful, to mild and gentle treatment. Febrile diseases observe a regular type, and the exacerbations recur at fixed hours; it is only occasionally that they are hastened or retarded a little. Inflammatory fevers are marked by a peculiar brilliancy of the eyes. If fevers of this kind are complicated with worms, they are sure to be attended by anomalous symptoms.

Pneumonia.—The pneumonia of children is recognized chiefly by the pain produced by respiration and coughing. The following is Dr. Gölis's usual prescription in this and other inflammatory diseases. *Rx.* Inf. Glycyrrhizæ rad; Decoct. Sem. Lin. āā ʒij; Potassæ Nitratis ʒj; Oxymel Simpl. ʒiss; M. summat coch. j. min. omni horâ. (For a child about two years old).

This mixture of an infusion of liquorice root and a decoction of linseed is the vehicle for the majority of potions prescribed at the children's hospital at Vienna. In private practice Dr. Gölis uses in its stead a decoction of the root of mallow or saloop. When resolution has taken place, the acetate of ammonia is substituted for the nitrate of potash, a drachm being added to the above mixture.

In the pneumonia of rachitic children, Dr. Gölis has a great predilection for the acetate of ammonia, because it stimulates a little; for in cases of this kind there is relaxation of the bronchi and accumulation of mucus. What Schöffer, in his treatise on the diseases of children, calls *pulmonary paralysis*, is, according to Dr. Gölis, a real bronchitis, and should not be treated with musk, but with leeches and blisters.

Angina Gutturalis.—(Cynanche tonsillaris). Dr. Gölis shows great dexterity in opening children's mouths, to look at the throat; he introduces his little finger into the mouth, and presses it on the base of the tongue. This causes an attempt at vomiting, opening the throat, and enabling him to satisfy himself as to the existence of an angina gutturalis. This disease is often accompanied by retching: when it is situated in the œsophagus, children keep their neck stiff.

We must never omit to look at the cavity of the throat, when cattarrh prevails epidemically, or we shall run the risk of overlooking many an angina. If this angina is accompanied by fever, nitre is to be given as in pneumonia. If there is no fever, the acetate of ammonia is to be given. Besides these internal remedies, the neck is to be warmly wrapped up, and covered with bags of medicinal herbs.

Angina Serosa.—This disease consists in swelling without redness, and is treated with the acetate of ammonia.

Angina Membranosa, or Croup.—When the appearance of croup exactly coincides with that of the eruption of measles, it is not to be feared; but it is dangerous if it appears while measles is running its course, or afterwards. When a child is affected with croup, he must not be suffered to sleep for more than half an hour at a time; he must be kept awake by continually giving him luke-warm drink. When calomel produces liquid stools, its use must be suspended for a short time; for if persisted in, it might easily cause an enteritis. The angina would disappear, but the child would inevitably be lost. We are not to use calomel with too much diligence, if the child is of a scrofulous habit, for this medicine might easily change a simple attack into a decided scrofulous affection. We must also beware of administering musk too soon against the remains of spasmodic cough, because if the slightest inflammation should still be present, this drug might cause a relapse. It is better to persist in the use of antiphlogistic remedies. The means employed by Dr. Gölis in croup are those adopted by all good practitioners: leeches, calomel, which is sometimes administered in the dose of a grain every hour, with sugar, besides frictions with a mixture of mercurial and mallow ointment on the neck and upper part of the chest; nitre in the intervals; emetics when the breathing is stertorous; and lastly blisters, which when employed in time, are, according to Dr. Gölis, the most powerful method of preventing membranous exudation.

The emetic which Dr. Gölis generally prefers for children, consists of Antim. Tart. with a few grains Ammon. Mur. dissolved in distilled water. He considers the sulphuret of potash as inefficacious and as difficult to administer, from the disgust which it excites, and therefore one with which we ought not to waste precious time.

Inflammation of the Cavity of the Mouth, or Stomatitis.—In this affection the acetate of ammonia is given internally. If there are small ulcers, they are to be touched with the following mixture: *Rx.* Mellis Rosæ ʒiss; Mucil. cydon. ʒj; M. Borax is too stimulating.

Difficult Dentition.—This affection is easily recognized by the rose colour of the gums,

which enlarge at the spot where the tooth is to come through. If dentition is very painful, it is often accompanied by an eruption, and in plethoric children, who have porriginous crusts upon their head, the porrigo sometimes increases suddenly.

Inflammation of the Spinal Marrow or Myelitis.—When a child presents the following symptoms, we may be sure it labours under myelitis. The body is quite straight from head to foot; the arms are strongly fixed against the chest; the fore-arms move but feebly in the elbow joint, but rather more in pronation and supination; the hand can sometimes be carried up to the chest, but rarely as far as the mouth. The lower extremities are firmly applied to one another in their whole length, and if we endeavour to separate them, the child cries. It also cries out loudly if the position of its body is changed, as, for example, if any one takes hold of it by the shoulder. The disease is also characterized by a great tendency to diarrhoea. Such are the symptoms of myelitis, before the inflammation attacks the brain, but when that is implicated, convulsions appear, and the diarrhoea ceases.

The treatment is antiphlogistic.

Acute Hydrocephalus.—If a child cries constantly from the day of its birth, if it eats a great deal, and the stools are greenish, if it lies quite straight in bed, and throws its head back, burying the occiput in the pillow, we may be sure that hydrocephalus will occur. When Dr. Gölis is apprehensive of this disease, he inquires if the children are cross, if they have become indifferent to what they most liked before, if they sigh frequently, and sometimes vomit, and if they often stare in a fixed and dreamy manner. A nasal utterance is also to be reckoned among the pathognomonic signs, and also the fact of the child's attempting to catch hold of things on one side. In a word, the look, the physiognomy, the gestures of a child threatened with hydrocephalus, are all full of meaning to the experienced practitioner.

A symptom never wanting in acute hydrocephalus, is a speedy diminution of the size of the abdomen. In children thus affected, the belly, however large, becomes flat during the inflammatory stage; and during the period of coma, this is the most certain diagnostic mark between acute hydrocephalus and typhus, in which the belly is most frequently tympanitic. However large the belly may have been before the disease, the bowels are so much retracted towards the vertebral column, that one might imagine that they had entirely disappeared. The most frequent causes are contusion of the head, concussion of the brain through falls blows, &c.

When the disease is merely suspected, calomel and tartar emetic ointment may be employed by way of precaution. Calo-

mel is generally the chief remedy in this disease; it is given in the dose of half a grain every hour or every two hours, or a grain every three hours, according to circumstances, such as the existence of constipation.

The application of cold lotion to the head, and the use of nitre in the inflammatory stage, may be continued without inconvenience when affusion has taken place; because (says Dr. Gölis), when this period has once arrived, nothing can do much harm. He says that cold affusions and the application of sulphuric ether to the head, which have been recommended by Formey in the stage of effusion, are of no use.

When acute hydrocephalus is accompanied by a watery diarrhoea, effusion does not easily take place. A favourable issue may also be anticipated if the child recovers the power of moving his head, and can turn it in every direction. It is well also to find the pulse losing its usual slowness, and becoming again regular and febrile: this is a sign of the commencement of absorption.

DISEASES OF THE CHEST.—*Simple Cough.*—When there is merely a simple cough, Dr. Gölis gives the infusion of liquorice root with the emollient decoction already mentioned, adding a few drops of Sydenham's laudanum and simple oxymel. If the cough becomes thick, instead of simple oxymel, he uses oxymel of squills. Thus, for a child two years old he prescribes \mathcal{R} . Inf. glycyrrhizæ rad; Decoct. lini. sem. (vel althææ) āā, ʒj; Laudani sydenhami, gtt. ij; Oxymellis simpl. vel scillæ, ʒiij; M. sit dosis coch. j. min.

When the cough is obstinate, or there is a neglected catarrh, Dr. Gölis strongly recommends dulcamara in the following form.

Inf. glycyrr. et decoct. emoll., ʒiij; Extr. dulcamaræ, gr. x; Laudani sydenhami, gtt. ij; Oxym. simpl, ʒij; M. The dose is to be a teaspoonful for a child two years old.

In the case of a child of four or five, who had an obstinate cough with fetid expectoration, Dr. Gölis gave a powder composed of equal parts of liquorice and vegetable charcoal, in the dose of a teaspoonful several times a day, and prescribed in addition a ptisan of lichen.

Convulsive Cough.—*Whooping Cough.* Dr. Gölis always treats whooping cough according to the prevailing character of the disease, and he teaches that we cannot be successful in the treatment, unless we know if the epidemic is of an inflammatory, catarrhal, or purely nervous kind. When there is no fever, and the disease is nervous, he prescribes \mathcal{R} . Moschi, gr. iij.; Extr. Opii. aquosi gr. ss.; Acac. gumm. pulv. ʒj.; Sacchari albi, ʒij. M. and divide in pulv. vj.; sumat j. tertiis horis.

Dr. Gölis also extols belladonna in whooping cough; but this remedy requires for its employment, that the disease should be

purely spasmodic, and not inflammatory, or catarrhal. When belladonna is indicated, he prefers the root in the following form: *Rx.* Bellad. rad. gr. j.; Extr. Opii. aquosi, gr. ss.; Sacchari albi, gr. lxxx. *M. ft. pulv. viij.*

One of these powders is to be taken morning and evening, or every three hours, according to circumstances, until the face becomes more animated.

At the same time he prescribes the following embrocation to be rubbed upon the epigastrium: *Rx.* Tr. Aromat. ʒss.; Laudani Syden. ʒss.; or the following mixture, which is spread upon soft leather, and applied to the region of the stomach: *Rx.* Electuar. Anodyn. Bellad. rad. pulv.; Laud. Syden. ʒʒ; Gum. Arab. ʒj.

A ptisan is to be employed, made of dulcamara, and the roots of liquorice and mallow.

In an epidemic hooping cough which occurred at Vienna in 1816. Dover's powder combined with emollients produced the most fortunate results, when administered as follows: *Rx.* Inf. glycyrr. rad.; Decoct. emoll., ʒʒ ʒiss; Potassæ nitr., gr. x; Pulv. Doveri, gr. j vel. ij; Laud. syden., gtt. ij; Syr. simpl., j. A teaspoonful of this mixture was given every hour to a child two years old.

Frictions with tartar emetic ointment torment children, and, for the most part, uselessly; and even when they lessen the hooping cough, the convalescence of the little patients is always protracted, principally because frictions of this kind destroy the appetite for a long time.

If there is no fever during the second stage of the disease, children bear cold drinks very well; otherwise, all their drink must be lukewarm.

Improvement begins as soon as the intervals between the fits of hooping increase. The disease is often succeeded by an obstinate cough, during which the children throw up sputa, as if they were phthisical. They should then take a decoction of sa-loop, fourteen ounces being made from fifteen grains, and an ounce of syrup of poppies added; and an infusion made of one ounce of mallow, and half an ounce of dulcamara and liquorice root.

Periodic Asthma of Children.—In this affection Dr. Gülis prescribes: *Rx.* Moschi, gr. ij; Mucil. acac., ʒij; Aq. tilie flor., ʒij; Ammon. succin., gtt. ij; Syrupi anthem., ʒss; *M.* A teaspoonful is to be given every hour to a child of a year old.

At the same time he orders warm baths, to which pearl-ash and an infusion of chamomile are added. The child remains a quarter or half an hour in the water, and is then immediately wrapped in warm linen and put to bed; the whole being done to promote diaphoresis. The potion is also given: *Rx.* Valerianæ rad., ʒss; Fiat inf., ʒij; tum adde; Ammon. succin., gtt. viij

ad x; Syr. Anthem., ʒss. At a later stage, blisters are applied to the chest.

Periodic Suffocation.—Fits of suffocation are sometimes observed in children; they become quite blue, and out of breath. These fits return, but not at regular intervals. According to the experience of Dr. Gülis, they may be caused by an effusion of water in the brain; or they may indicate the first stage of chronic hydrocephalus. If the disease is accompanied by fever, this must be combated first of all; and it will then be well to administer small doses of calomel alternately with the following powder: *Rx.* Valerianæ pulv., gr. v; Calcis carb; Sacchari albi, ʒʒ ʒss; *M. ut ft. pulv. t. d. sumendus.* Baths, impregnated with chamomile and pearl-ash, are also to be ordered, as in the case of periodic asthma.

Palpitation of the Heart.—Dr. Gülis treats this as a separate disease, and orders a few drops of the following mixture to be taken three times a day: *Rx.* Tr. digit., ʒiss; Ammon. succin., ʒss; Laudan. syden., ʒj; *M.*

Hemoptysis.—In this disease Dr. Gülis extols an emulsion of gum combined with decoction of digitalis, particularly when de-traction of blood in any shape is contra-indicated by a state of cachexia. This cures the hemoptysis without leaving any induration behind as astringents do, in consequence of which a little hard cough usually remains.

(To be continued).

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Hospital Reports.

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NORTH LONDON HOSPITAL

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Cases of Chorea, cured by Carbonate of Iron, in Large Doses.

MARY ANN WILSON, aged 15, was admitted December the 16th, 1834, under the care of Dr. Elliotson. About two months before she caught cold. Shortly after she was seized with a pain in the head, but did not discontinue her duties as servant, until about a fortnight ago, when she says her master beat her on the back of the head with a walking stick. He had gone out and ordered her to sit up for him, and threatened if he found her asleep, he would kill her. He came home about three in the morning, and finding her asleep, beat her. She was much frightened at the time, and has not since been able to control the action of the muscles of the upper and lower extremity and those of the neck. The muscles of the face are not much affected, when she is agitated or told to put out her tongue. She finds walking, sitting, and the recumbent posture difficult. The motions are much increased when any question is put

to her, and she cannot utter a single syllable, except when she is perfectly still, and the movements quite ceased, which is very seldom. Has had no pain in the head for a fortnight, but complains of tightness in her breathing, which has existed three days; there is no cough. Tongue slightly furred; pulse 90. Bowels regular; has not menstruated for two months; began to do so at fourteen. The involuntary motions first appeared in the anus, then in the face, beginning to affect the lower extremities only two or three days since.

Rx. Carb. terri 3ij, bis die.

Full diet.

18th.—No better; took medicine every six hours.

Jan. 5th.—Much better; the convulsive motions of muscles less violent, but the eye-balls still in continual motion; the recumbent position is not now painful, and she sleeps well at night.

12th.—Motion of eye-balls almost ceased; general health improving; was seized with giddiness this morning, which lasted several hours.

29th.—Less giddiness; pain at back of the head; much nausea during the last two days; can now keep herself perfectly quiet.

Feb. 20th.—Discharged; having been free from the chorea some time.

Thomas Martin, aged 12, was admitted April the 25th. Is an errand boy, and has been ill ten days; was first much frightened by a chaise starting off near him, but not to touch him. The day following, he began to have irregular involuntary motions in the hands, extending shortly afterwards to the other parts of the body.

Rx. Ferri carbon 3ij singulas horas, the bowels to be kept open by medicine if required.

28th.—The medicine increased to-day to 3ss doses.

29th.—Does not appear so well; he frequently screams out; says he does so, because his arms are painful; they look red from friction against the bed-post; complains of sore throat; it appears slightly red. 3ss carb. ferri, 4 ta. quaque hora.

May 7th.—Considerably better; the motions being much less violent.

June 9th.—Since last report has been gradually getting better; the medicine has been continued in the last-named doses. It is remarkable that it has not produced headache, costiveness, or a single unpleasant symptom. Since about the middle of May, there has been little or no involuntary motion, and he is so far recovered as to be able to leave the hospital.

Use of Strychnine in Defective Vision.

At page 380 of the present volume, we reported the case of Samuel Nagle, who had suffered from inflammatory dropsy. He gradually improved to the 28th of April; seemed then perfectly well; all at once, however, he complained of a defect in his sight, that he could not clearly see; there were no marks of inflammation in the eye, and Dr. Elliotson ordered strychnine in doses of 1-9th of a grain to be given him, in order to stimulate the nerve; in about a week he was completely relieved. The same plan of treatment was adopted with a girl, who was admitted a short time since with hysteria and psoriasis. She had been bled for tenderness in the epigastrium, when she was suddenly taken with pain in the eye, and inability to distinguish objects clearly. 1-12th of strychnine was given her twice a day; in three days the affection was removed.

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CLINICAL LECTURES.

WE have always advocated the usefulness of clinical lectures, and the necessity for their delivery by hospital physicians and surgeons; Dr. Elliotson, in order that no case of interest should be lost to the students, has commenced lecturing three days a week at the North London Hospital. We consider such a proceeding worthy of being put on record as a precedent desirable to be followed;—shewing as it does the interest of the professor in the instruction of his pupils, and the commencement of an era of more usefulness in these public institutions.

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Case of seven Soldiers wounded by one Bullet.

The 3rd of July 1830, towards six o'clock in the morning, twelve soldiers were quietly retiring from a trench whither they had brought food for their comrades. They marched in two ranks, and in each rank they were kept at some distance from each other in consequence of the sticks by which they carried the cooking pots. At the time these men were passing our position, a ball from the fort of the emperor wounded seven of them in the following manner. The soldiers that were first, with regard to the ball, but last with regard to the direction of the march, received the ball on the right shoulder and in the breast. The arm was taken off, and the chest laid open, and the lungs considerably contused; he died on the spot. The second had the fore-arm and the lower third of the arm carried away, and the parietes of the chest slightly contused. Amputation of the arm in this case was com-

pletely successful. In the third the ball struck the right loin, carried away the integuments and muscles to a great extent, and laid bare the external surface of the liver, part of which was taken off; he died immediately. The fourth had the muscles of the buttocks almost entirely carried off, the coxo-femoral articulation opened, the extensor muscle of the aponeurosis of the thigh and the sartorius torn, and the anterior and superior spine of the ilium fractured. Had the mischief been less extensive we might have ventured to disarticulate the femur: but the extent of the local and general disorder having made us consider death as certain, M. Devaux, after cleansing and giving a new surface to the entire wound, thought it better to attempt healing by first intention, without however any hope of success. With stitches and adhesive plasters the hanging portions of tissue were brought together, and the whole appropriately maintained and covered. He died on the way to the temporary hospital. The fifth had his thigh carried off above the condyles of the femur: immediate amputation higher up saved him. In the sixth the ball struck the middle part of the leg: amputation saved this one also. The seventh, who was not exactly in line, had only the integuments of the lower and external portion of the leg slightly contused: no accident supervened in this instance.

Thus of the seven wounded—or rather six, for the last could scarcely be said to be so—three died directly, and the three others required amputation, which succeeded in all of them.—(From a paper by M. Bonnafont, assistant-surgeon in the army of Algiers, inserted in the *Journal Hebdomadaire*, May 30.)

Doings in the North.

We have received reports of several cases, which speak little in favour of the change of surgeons made in the Royal Infirmary. Were we inclined to publish *unfortunate* cases, we have full means of doing so in those before us. Our plain motto has hitherto been impartiality—we hope never to lose sight of it. We cannot, however, help thinking that the splendid talents of the last surgeon to the institution in question, must be greatly missed.

The London University has been presented with £1,000 from an unknown friend, signing himself "A Patriot."

Cats in Printing Offices.

It is a remarkable fact that cats cannot be reared in printing offices without considerable difficulty. M. Huzard Courcier thinks this is in consequence of the very finely powdered metallic particles that abound in those places, which irritate the animals to mad-

ness by the itching they produce, until the workmen destroy them. When they eat mice that they have caught in the printing shop, they are seized with vomiting, and are sick for several days. There are some examples of cats that have lived altogether in the localities mentioned, but they are rare.—*Annales d'Hygiene Publique*, April.

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RADIX RHEI V. THE RHABARBARIANS.

SIR—I am in the habit of hearing much of your valuable Journal, which is distinguished by classical acumen combined with sound practical knowledge, obviously the result of much reading and reflection. These virtues are duly appreciated; which induces the belief, that you will correct the extraordinary course you have for some time adopted, in the use of a name respected throughout the world—indeed sir, it is an abuse to be at once deplored and reprobated, in one of your high attainments. I have now to appeal to you on the subject of the Hall, the members of which certainly may be regarded as the night-men of the profession. These sir, you sometimes designate Solons, by which I suppose you mean the lineal descendants of the ancient law-giver; this assuredly cannot be condemned. What I complain of is, your bringing my revered name into contact with these vile huxters and dry-salters. You call them rhabarbarians, toujours rhabarbarians—call them barbarians if you please, but the assimilation of my well-known and benign virtues with these bags of soot and glauber salt, can no longer be endured. Your inadvertence has given great offence to my magnanimous allies, from whom I have received numerous communications and assurances of support, should due reparation not be made—but a word to the wise.—I beg therefore to be no longer confounded with these assafoetida cormorants, examinera, and mandrakes—these walking buccabungo, cabbage elephants, and potatoe heads, more horrible to contemplate in their noxious recesses and dens, than anything, however concentrated or compounded, in the way of abomination, heretofore the produce of the slime of the Nile or the Cloaca,

I have the honour to be, Sir,

RADIX RHEI SALUTEM FERENS GENTIBUS
UBIQUE TERRARUM.

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CORRESPONDENTS.

A Subscriber.—Surely our friend could not expect two courses of Physiology in each Number.

Dr. Thomson's Lectures.—We again assure our Correspondents of this week, that the Toxological part in the Lectures was purely experimental, and as such unsuited for publication.

A Matter of Fact Man.—This letter will be answered in our next.

THE

London Medical and Surgical Journal.

No. 177.

SATURDAY, JUNE 20, 1835.

VOL. VII.

LECTURES
ON THE
INSTITUTIONS OF MEDICINE,

DELIVERED BY JOHN FLETCHER, M.D., F.R.C.S.E., AT THE ARGYLE SQUARE SCHOOL OF
MEDICINE, EDINBURGH; SESSION 1834-35.

LECTURE XXI.

Food and the Fluids, as direct Stimuli to Irritability—Indirect Stimuli.

ANALOGOUS to the last mentioned stimulus is that of aliment, taken at intervals by most animals—for plants have no corresponding organ—into the stomach. Its action appears to be partly chemical and partly mechanical, and to be exerted, at once on the irritability of the capillary vessels of the stomach, so as to promote its proper secretions and absorptions, and on its muscular fibres, so as to excite its contractions, the irritation thus produced in the stomach being extended, by sympathy, to almost every organ of the body, and in particular to the muscles of voluntary motion, the greater degree of healthy contractions thus produced in them giving rise to the renewed energy and alacrity so generally experienced from taking aliment into the stomach. Hence the necessity of food and drink being not only nourishing, but stimulating, and the impropriety of inculcating a long continued use of the same substance, or very great simplicity in diet in general; and as, generally speaking, the most concentrated aliment is the least stimulating, and therefore the least digestible, it is perfectly possible, however paradoxical it may appear, to starve an animal by giving it too nutritious food (a). All animals have accordingly a range, in this respect, more or less extensive; and even the young of mammals, which feed so long upon the milk of the mother, furnish no exception to this remark, for not only is the quality of this milk very different at different periods after parturition, but it is, at all times, a very compound fluid. The Brahmin thrives on rice, the African gum-gatherer on gum, and the West Indian negro on sugar, but it is only for a time, or with a due admixture of other substances; and it was the experience of this necessity of such additional stimulus which taught the Esquimaux, the Kamskatdales, the Ottomacs, and others, who could get nothing better, to mix saw-dust, or even clay, with their train-oil or other food, and has led mankind in general to the almost universal use of salt and other condiments. The chyme, into which the aliment is gradually converted in the stomach, acts, in like manner, as a stimulus on the irritability of the capillary vessels and muscular fibres

(a) The fatal effect already alluded to, of the attempts made by Dr. Stark to live on one kind of diet alone, however nutritious, and those of similar experiments made by Magendie on dogs and other animals, sufficiently illustrate this important fact, and abundantly prove that it is not from their food being azotized or non-azotized, salt or fresh, that sailors on long voyages, or persons in besieged towns and other similar situations, take the scurvy, but from their getting little or no food at all, or—what amounts nearly to the same thing—food uniformly of the same character. They

likewise display the impropriety of giving to convalescents, and others whose digestive powers are impaired, arrow-root, sago, tapioca, jellies, eggs, and so forth, consisting, as they do, of comparatively simple and highly concentrated matters. Many would recover on hung-beef, grated on bread and butter, or on the flesh of “a tough old cock boiled to rags”—a favourite prescription of the late Dr. Willan—who perish on veal and chicken-broth, and other slip-slop appurtenances of a sick-room, and for an obvious reason.

of the long intestinal canal, during its slow progress downwards; and thus the stimulus indirectly imparted to an animal by the aliment, although taken perhaps at long intervals, is hardly less continuous than that communicated by the air or water which constantly surrounds it, and with which its reciprocal action is uninterrupted. It is a common error to regard the stimulus of the aliment as only an occasional one. It is undoubtedly in more active operation immediately after taking a meal than at other times; but it is perhaps never entirely withdrawn even from the stomach, during the longest natural intervals of abstinence, and it is certainly in constant operation indirectly on the intestines. Generally speaking, the necessity for a frequent supply of aliment is greater the higher is the rank of the animal, but the quantity taken at each meal is proportionally less; and this power of sustaining long abstinence, together with extreme voracity at intervals, is in general more remarkable in cold-blooded than in hot-blooded animals. That man is capable sometimes of enduring very long abstinence is sufficiently established by many very remarkable cases, both of individuals (a), and of many persons together who have suffered shipwreck, or been exposed to any other common calamity, but that he does not, at least in a civilized state, habitually subject himself to this is certain; and again, that he can occasionally devour an immense quantity of food at once is sufficiently well known, but it is equally certain that such is not, at least in a state of civilization, his usual practice (b). On the other hand, many insects, and in particular the Lepidoptera, habitually subsist for weeks or months without food, and the scorpion (*Scorpio*, 17) has been known to endure an abstinence of three months, the spider (*Aranea*, 17) of a twelvemonth, and the beetle (*Scarabæus*, 21) of three years, without inconvenience. Among the vertebrated tribes, also, some fishes, as the perch (*Perca*, 28), are said naturally to take food only about once a fortnight. So, among reptiles, the crocodile (*Crocodylus*, 35) has been known to sustain a want of food for two months, the chameleon (*Lacerta*, 35) for eight months, the toad (*Rana*, 32) for fourteen months, the land-tortoise (*Testudo*, 53) for eighteen months, and the serpent (*Coluber*, 34) for no less than five years. And even the hot-blooded vertebrated animals bear abstinence longer than is commonly supposed; the eagle (*Falco*, 40), for example, has been proved capable of doing without food for twenty-eight days, and, among mammals, the civet (*Viverra*, 49), for ten days, the antelope (*Cervus*, 45), and the wild cat (*Felis*, 50), for twenty days, the badger (*Canis*, 50) for a month, the dog (*Canis*, 50) for thirty-six days, and, it is said, the bear (*Ursus*, 50) for six months. The quantity, however, which the lower tribes of animals sometimes take, when they can get it, is enormous; the voracity of some fish, for example the conger eel (*Muraena*, 26), the mackerel (*Scomber*, 28), the perch (*Perca*, 28), the pike (*Esox*, 29), the dog-fish and the shark (*Squalus*, 31), being proverbial, and that of many reptiles, as the boa and crocodile, birds, as the vulture, and quadrupeds, as the wolf and hyæna, being almost equal to it. The young of all animals, again, unlike what occurs with respect to want of air, bear want of food less easily than adults, and take it both more frequently and more copiously. The larvæ of insects are known sometimes to take two hundred times their own weight of aliment in the course of a day, and the rapidity therefore with which they are enabled to dispatch the carcass of a large animal, which has been elsewhere alluded to, is not wonderful. The quantity of food also consumed by a growing child is in general almost inversely as its age, and accordingly its weight is commonly tripled by the expiration of the first year after birth, while it takes six years more to double its weight at the first year, and seven years more again to double its weight at the seventh. It is unnecessary again particularly to allude to the cases in which living animals have been found imbedded in situations in which, if respiration were difficult, the reception of aliment must be supposed to have been almost impossible. It has been imagined that, in these cases, they subsist upon their own exuviae of one kind or another (c); and perhaps these may be quite sufficient for the purpose, under circumstances of such diminished energy of all their functions. They must be conceived to be in a state analogous to what is called hibernation; and we know that marmots, bats, and other quadrupeds,

(a) Pouteau, Mem. de Paris. 1769; Mackenzie, Phil. Trans., 1775; Willan, Phil. Trans. 1793; Currie, Med. Rep., 1804; Royston, Med. and Phys. Journ., 1809, &c.

(b) Some savage and semi-savage tribes, as the Norwegians and other inhabitants of the north, are characterized by their ravenous and indiscriminate appetites. A Yakout or Tongousi will eat forty pounds of meat a-day, and three of them easily make an example of a rein-deer at a meal. One Yakouti, attached to the suite of Admiral Saritcheff, is said to have been accustomed to consume daily, the hind quarter of an ox,

twenty pounds of fat, and a proportionate quantity of melted butter for drink! Our civic aldermen, with their six quarts of turtle soup per man, are after all mere triflers as to quantity; and, with respect to quality, even the notorious French soldier Tarrare, who used to eat every kind of offal, and even putrid limbs taken from charnel-houses and dissecting-rooms, or poultices and plasters, collected in hospitals, and reeking with blood and matter, hardly surpassed some of these tribes in the indiscriminate nature of the materials of their repasts,

(c) Grignon, &c.

during this state, as well as insects during their metamorphoses, neither take nor require any aliment whatever. The aliment has never been explicitly identified with life, although the hypotheses of some of the advocates of the vital principle doctrine tend directly to the inference that it contains this principle (a), it is superfluous to say how unreasonably and absurdly.

The only remaining head of direct stimuli to the irritability of organized beings includes the various fluids, whether crude, mature, or secreted, which constitute a part of themselves. Of the sap, cambium, and other fluids of plants, in this capacity, it is unnecessary to speak particularly, since what is said of the corresponding fluids of animals may be easily applied to them; and of the arterial blood, venous blood, lymph and chyle, in their character of stimuli to irritability, some notice was taken during the discussion of the question, whether they were entitled to be considered as possessed of this property. And how constant and important a stimulus, partly chemical perhaps and partly mechanical, these must constitute to the heart and capillary system—the latter of which is universally diffused throughout all the organized tissues—will be sufficiently apparent when we reflect that not less perhaps than fifteen thousand pounds of arterial blood, or a quantity equal to more than a hundred times the average weight of a human being, is sent out from the left heart, and of course traverses the parenchyma of the body, to reach the right heart by the veins and lymphiferous and chyliferous vessels, while of course the same quantity of venous blood, lymph and chyle is expelled from the right heart, and necessarily passes through the parenchyma of the lungs, to return to the left heart by the pulmonary veins, in the course of twenty-four hours; so that each side of the heart, estimating the whole organ to weigh ten ounces, receives a daily supply of about forty-eight thousand times its own weight of these fluids into its cavity, and every point of every organ of the body—heart included—through its parenchyma, a daily supply upon an average of not less than a hundred times its own weight! The stimulus communicated then by these fluids to the body collectively, supposing it to bear any proportion to the frequency of their renewal in each organ, must be enormous; but we must take care to keep constantly in mind that these fluids have two almost directly opposite relations to the heart and capillary system, and that as they are, on the one hand, a chief stimulus by which the motions of these organs are excited, so they are, on the other, the load to dispose of which alone these motions are in requisition. In the normal state of the body their operation as a stimulus is precisely such as to excite the motions required, either to urge them forward, or to dispose of a portion of them in the processes of nutrition and secretion, as a load; but, under various circumstances of disease, at one time their action as a stimulus is so great as to excite more violent motions than their resistance as a load requires, while at another their resistance as a load is too great to be overcome by the motions which their action as a stimulus is competent to excite. Of the former of these abnormal conditions, we have an example, with respect to the heart, in the second stage of fever, when the pulse is found to *fall* upon bleeding, and, with respect to the capillary vessels, in the stage of inflammation preparatory to that in which the blood becomes accumulated, when the parts are constricted and blanched; of the latter we have an example, with respect to the heart, in the first stage of fever, when the pulse is found to *rise* upon bleeding; and, with respect to the capillary vessels, in the stage of inflammation consisting in the accumulation of blood, when the parts are turgid and red (b). This is not, however, the place for insisting particularly on these antagonizing relations in which the fluids in question stand to the heart and parenchyma, since it is in their character of stimuli only that they fall at present to be considered. And a similar excuse may be offered for declining in this place any agitation of the question whether these fluids are, under all circumstances, equally efficient as stimuli, or whether their quality is liable

(a) Such is the case with that of Dr. Pring, who represents life as continually formed "by the assimilation of its identity from the blood," the said blood being capable of being formed of course only by the assimilation of its identity from the food; so that, if life be a simple substance, the food must to all intents and purposes contain it. In general, however, the vital principle school of physiologists, as, under the ancient regime, they represented aliment, not as life, but as the staff of life, so, under the more modern, they were satisfied with enumerating it as one of their six non-naturals.

(b) There is no principle in semiology or

therapeutics more important, or of more frequent application, than that which impresses this two-fold, and, as it were, adverse relation of the blood to the reservoirs and vessels in which it is contained; and it was from the fatal oversight of regarding this fluid always in the light of a stimulus, and neglecting to observe that it sometimes oppressed more by its bulk than it stimulated by its surface, that all poor Brown's practical errors resulted—errors which are still held in remembrance only to be execrated, while his merits are unknown or unregarded. So true is it that "the evil that men do lives after them; the good is oft interred with their bones."

to such changes as to render them more or less powerful, in this capacity, at one time than at another. That they undergo in many diseases very remarkable alterations, and such as may most materially modify their action in this way is certain; but our business at present is strictly physiological, and it would be quite out of place, therefore, to enter here at any length into a question, at once one of the most obscure, and one of the most extensive in all pathology, particularly as the presumption of any primary loss of balance in the principles of these fluids, such as a superabundance of sugar, of sodo-albumen, of fibrin, of acid, or of alkali, of oxygen, hydrogen, carbon or nitrogen, ever occurring as a cause of diseases appears to be quite unfounded, whatever alterations they undergo in such diseases being, in all probability, the result generally of a vitiation of the secreted fluids and solids, which are subsequently received into the circulating fluids by absorption. In the same manner as the arterial blood, venous blood, lymph, and chyle, act as stimuli on their respective systems of vessels, so, among the perspired secretions, act the carbonic acid and halitus from the lungs upon the bronchial tubes, producing, by their momentary accumulation, an irritation which at once excites these vessels to contract, and, as extended by sympathy to distant organs, constitutes the chief primary stimulus to expiration. In like manner act the other perspired secretions—the gastric fluid, the menstrual fluid, and the rest—among the follicular secretions, the cystic bile, the thick portion of the semen, the stools, &c.; and among the glandular secretions, the hepatic bile, the pancreatic fluid, the urine, the thin portion of the semen, the tears, and the saliva, first each upon its own proper secreting surfaces, follicles or ducts, and next upon the other organs to which many of them are subsequently conducted, the irritation so excited being often, like that of the rectum by the stools, and urinary bladder by the urine, extended by sympathy to those voluntary muscles which co-operate in evacuating them, and constituting thus the chief primary stimulus to their action in this way. The greater number of these secreted fluids are more or less proper to certain parts of certain animals, and they cannot therefore be essential otherwise than as local stimuli in any case, while their action even in this way is often unnecessary; nor, indeed, are the arterial blood, venous blood, lymph, and chyle, the distribution of which is so general, and some modifications of which are almost universally met with, any more than a great quantity of caloric, or a frequent supply of air or aliment, equally indispensable as stimuli to the irritability of all tribes of animals. In general those animals which are the least dependent on the three last-mentioned stimuli, are the least so likewise on the fluids in question; and, accordingly, cold-blooded animals commonly manifest this independence more remarkably than those with hot blood. In man, as is sufficiently well known, the abstraction of even eight or ten ounces of blood—probably not more than one-eightieth part of the whole amount of his circulating fluids—frequently produces a very striking diminution of general irritation or vital action; whereas the frog or newt continues sometimes to live for days, and to exercise most of its accustomed functions without apparent impediment, although the greater part of its whole mass of blood has been withdrawn. The young, likewise, of all tribes of animals appear less easily to sustain a diminution of this stimulus than adults; and there are not wanting instances in which the quantity abstracted by the bite of a single leech has proved fatal to infants. With respect to the uses to which the blood, lymph, and chyle are subservient, otherwise than as immediate stimuli to the irritability of the heart and capillary system—such as that of producing, by their momentary accumulation, an irritation of contiguous organs—like that excited in the lungs by the momentary retention of venous blood in the pulmonary arteries, which, extended by sympathy to distant organs, becomes the principal primary stimulus to inspiration—or that of serving by their retention for a time in the erectile organs, such as the papillæ of the dermoid and mucous membranes, the corpus spongiosum urethræ, the corpora cavernosa clitoridis, the fimbriated extremities of the fallopian tubes, the nipple of the mammæ, the corpora cavernosa penis, &c., to distend these organs, and thus to adapt them to their respective functions, or, lastly—the most important office of all—that of furnishing the materials out of which the various solids and fluids of the body may be secreted by the action of the capillary vessels; with these we have nothing to do at present, since it is of these fluids in the first of these capacities alone that we are now speaking; and the same thing may be said of the several secreted fluids above-mentioned, many of which, besides acting as mere stimuli to the irritability of the organs with which they come immediately into contact, perform numerous important offices. Such, then, appears to be the true relation in which all these fluids stand to life; the motion of the blood or any other of them being the immediate domicile of this, as a substance, being too obviously incorrect to require any animadversion, and that of any such fluid being possessed, though not of life, still of vitality, having been already, it is hoped, sufficiently refuted (a).

(a) The patrons of the doctrine of the inherent vitality of the blood have merely mistaken one condition of life for the other.

It is in general the most essential stimulus to vitality, and therefore as necessary to life as vitality itself. — It cannot be both en-

We come next to the indirect or secondary stimuli to irritability, beginning with sympathy and passion, or instinct, the latter of which is merely one department, as it were, of the former, while both again, regarded as stimuli to irritability, are merely varieties, as before observed, of sympathy, inasmuch as by sympathy, in the strictly physiological sense of the word—in which alone it is here employed—is to be understood the translation of a direct or primary irritation of any organ, except the brain, to any other organ; and by the term passion, or instinct, in the same sense, the translation to any other organ of such a direct or primary irritation of the brain. It will be in future shown, indeed, that an irritation of the brain is, strictly speaking, never absolutely direct or primary, since it must be always preceded by sensation, as the only stimulus to every modification of thought, as this again must be by irritation, as its only stimulus: nevertheless, in as far as regards passion or instinct, considered as a stimulus to irritability, it originates indirectly or secondarily in an irritation of the brain, which, therefore, in relation to this stimulus, is direct or primary, by whatever conditions it may itself have been preceded. Hence sympathy, on the one hand, and passion or instinct, on the other, are all resolvable into one species, as it were, of indirect or secondary stimulus to irritability, the former variety being sometimes called, by way of distinction, *organic*, and the latter *animal sympathy*. And that such a stimulus to irritability as sympathy and passion, or instinct—vaguely and indefinitely as these terms are frequently employed in physiology—actually exists, the employment of such terms not being merely the substitution of words for ideas, as is sometimes supposed, is obvious from the familiar facts of sneezing—already instanced—which is effected principally by the action of the abdominal muscles, being excited by snuff or any similar substance applied to the schneiderian membrane, and of starting, which is effected chiefly by the muscles of the spine being excited by surprise or sudden apprehension of danger. The snuff cannot have produced a direct irritation of any part, except of the surface to which it was applied, nor the surprise or dread of danger a direct irritation of any organ, except of that which is the immediate seat of passion or instinct; but the abdominal muscles, on the one hand, and those of the spine, on the other, must have been acted upon by a stimulus, or they could not have been contracted—it is this translation, by whatever means it may be effected, of a direct or primary irritation of one organ to organs at a distance, which is called respectively sympathy and passion, or instinct, when we speak of these as powers acting on irritability.

dowed with a power to act on this property, and possessed of the property of being acted on by this power. It is obviously the former,

ergo—but the hypothesis has been already weighed in the balance and found wanting. *Quiescat in pace.*

SELECT LECTURES,

FROM

M. BROUSSAIS'

Course of General Pathology and Therapeutics;
translated and revised

BY JAMES MANBY GULLY, M.D.

LECTURE V.

Phlegmon—Gout.

PHLEGMON is that inflammation of the cellular tissue that has served as a type of all inflammations among ancient authors, because they were best acquainted with it. Our chief classical writers scarcely allow the term inflammation to erysipelas; and those of the Galenical sect assumed that erysipelas was the effect of the bile, while phlegmon originated in the blood. With them phlegmon was the principal disease, the inflammation par excellence. It will also serve us in our researches, and you must ever keep it before you.

Phlegmon presents the four leading characters of inflammation, pain, swelling, heat, and redness. All the senses are witnesses of its presence when subcutaneous: it raises the skin: to the hand it gives a feel-

ing of smoothness, accompanied with heat: there is pain, at first burning, then pulsative and increased by pressure: the redness is less intense than in erysipelas.

The causes of inflammation of the cellular tissue are those of all inflammations, and at the head of them are traumatic lesions; it is the prominent phenomenon of surgical disease. In a part wounded, there is first a flow of blood, then of serosity, then tumefaction, and then sanguineous injection with heat, and this becomes an actual phlegmasia. The cellular tissue of the irritated part swells, fills with serum and blood, and inflammatory irritation is developed; this irritation thus becomes a very important phenomenon. Whenever inflammation is developed, the cellular tissue participates in it, and plays a more or less prominent part; it furnishes the creamy matter that is observed on the surface of the skin after blistering with suppuration; it is in it that the inflammation which takes place when muscles are cut, or when they are only congested, exists. In short, the more cellular tissue an organ contains, the more does its inflammation bear the character of phlegmon: so that there is some reason for erecting the latter into the type of inflammation.

It is not in it alone, however, that that phenomenon occurs: inflammation and sub-inflammation are possible in a variety of other tissues.

Next to the first cause, vulneration or division, we find laceration, pressure, contusion, fractures, and other violent causes. At other times, phlegmon is the consequence of propagation: inflammation occurring in some membranes of relation, as the skin and mucous membranes, it extends to the subjacent cellular tissue, as may be remarked in phlegmons that follow upon erysipelas and anthrax. In some instances it appears to be critical, being developed after some internal inflammation. In this character it is seen in the cellular tissue of the parotid glands and lymphatic ganglions, where it forms buboes: around the anus; around the joints, where it was often remarked by Hippocrates, unless, indeed, he confounded it with arthritis: and in the vicinity of organs that have some secretion, a fact that might lead us to regard it as the extension of a sort of depurative excretion. But we must not give the epithet of critical to the inflammations of the skin and cellular tissue that are the result of pressure in prolonged acute disorders, inasmuch as the causes are different.

In many instances, no account can be given of the appearance of phlegmons, and we are forced to ascribe it to a general inflammatory disposition. We see them renewed in all parts of the body, as if there really existed a phlegmonous diathesis: this is chiefly remarked after the eruptive phlegmasiæ.

Phlegmon is characterized by pains, smarting, throbbing, as if there were a pulse in the part—and in fact there is one, the swollen arteries producing a sensation that is not illusory—vessels that at first do not appear sanguineous, but afterwards become so, multiply, the tumefaction goes on increasing, accompanied with heat, unyielding to pressure in the centre of the inflammation, and with œdematous gorging to a certain distance around, when the phlegmon is subcutaneous. This gorging does not yield to pressure so easily as that which proceeds from another cause: in the more distant parts of it, however, it may be depressed and retain the impress of the finger, because it gradually descends from the degree of inflammation to that of dropsy, and the further from the centre of the inflammation we go, the more serous is the engorgement. Regard must also be had to constitutions: some subjects are robust and have firm and unyielding tissues, while in others the tissues are lax and flaccid, either by nature, or in consequence of previous phlegmasiæ that have enfeebled them; phlegmons, though essentially the same in both, do not exhibit equally decided characters.

This is what we see when the phlegmon is situated beneath the skin; but if it occurs

between muscular masses enveloped in aponeurosis, it is not so easy to seize its characters. Here you must for the first time use deduction; it is well to exercise yourselves in it. When, for instance, you remark pain in the thigh, with smarting, tension, weight, swelling, and heat, you suspect a deep-seated phlegmon; but to confirm your suspicion, you must have recourse to the sympathetic phenomena or dissemination, an idea of which you should in the first instance draw from visible phlegmon. And what do we observe where this has made some progress? We observe the patient to suffer from shiverings, lassitude of the limbs, more or less headache, decrease, or appetite replaced by thirst: we observe the pulse to be accelerated, and that being small and frequent it soon becomes fuller and larger, retaining its frequency, that the skin, at first cool, grows hot, and becomes halitous over the whole body. To produce these symptoms, the phlegmon must be of some extent; for if it be limited, as in a light whitlow, no febrile symptoms, none of the phenomena of dissemination are developed. I dwell on this idea, and shall return to it; further on, you will see why I am anxious that you should understand it*.

Return we to hidden phlegmon. Here is a thigh swollen, unyielding, hot, and painful: you suspect there is a phlegmon forming in it, and you wish to be certified thereanent: how will you proceed to satisfy yourself? You observe whether sympathetic symptoms are superadded to the local signs; if the patient has felt malaise or gastric disorder, if he has had fever, the phlegmonous pulse, the halitous skin, &c., you pronounce the existence of phlegmon, you then feel the limb more attentively, and ascertain a turgescence. If you are unable to stay the disorder, or if you see it for the first time when it is considerably advanced, you remark a swelling that occupies the cellular tissue, and you continue by the touch and the above mentioned signs to detect a sub-aponeurotic focus of inflammation. These data suffice to assert its existence, and even to determine you in practising an incision that shall be deep enough to reach it. If you ask the most experienced surgeons how they proceed in similar cases, they will tell

* The same must be my excuse for "selecting" what many readers may consider trivial lectures on boils and whitlows, and erysipelas. It requires either oneself to possess or to have studied and appreciated Broussais' mode of connecting facts, to say beforehand how he intends to apply the well-known phenomena hitherto announced, to the explanation of the phenomena that are observed in more obscure diseases. This present instance of hidden phlegmon is a simple example of that mode; "further on" the reader will see more of it.—J. M. G.

you that there was fever with a heat peculiar to phlegmon, that at the period of the formation of pus the fever ceased and was replaced by shiverings or became intermittent, that these phenomena were in corroboration of their own presumption that there was a collection of pus in the part, and that they consequently determined on the operation.

But let us examine with more precision the progress of phlegmon. It may end naturally, and by a rapid resolution, or be so diminished by art that the same effect shall ensue; it may go on to fluctuation and be then resolved, and there are numerous instances of phlegmons that were on the point of being opened which have been altogether absorbed; in which case we generally distinguish the spot that the pus occupied, by a softness on pressure. But it more usually happens that by a law which we can only observe and not explain, the inflammation concentrates in the skin corresponding to the centre of the tumour, the cellular plates become gradually decomposed and an opening is effected in the point, or if it does not take place there, if an aponeurosis presents an obstacle to it, the inflammation takes another direction, is propagated through the interposed cellular layers, causes them to suppurate, and a large sub-divided abscess is formed, constituting a serious and complex disease. When the phlegmon exists in a part where the cellular tissue is not very lax, the pus concretes around the collection and forms a kind of sac or cyst confined by a false membrane; this, however, is rare in visible phlegmons, and is more common in the viscera.

The phlegmon having thus formed a collection of pus, if this is laid open the suppuration gradually diminishes, the centre shrinks, and the pus finally becomes a plastic matter which aids cicatrization. If the point is not opened and the pus is obliged to pass through the layers of cellular tissue, it becomes absorbed, and the patient infects himself, a foul matter is incessantly re-entering the system, and is a continual stimulation, while a febrile state is generated by the irritation of the viscera thus acted upon by the matter. The whole system is thus threatened with a consecutive inflammatory state, the parts that are more particularly liable being the great visceral centres, the organs of digestion first, and then those of respiration. The inflammation also tends to repetition in the serous tissues, in consequence of their analogy with the general cellular tissue. The lymphatics and veins in the neighbourhood of the phlegmon exhibit a remarkable appearance: the inflammation inclines particularly to pass to the veins. The ultimate term of all these phlegmasiæ is a series of consecutive phlegmons which lead to consumption, diarrhœa, emaciation, and death.

The fluids also present remarkable ap-

pearances. If you observe the blood at the onset of a phlegmon you will see an inflammatory coat, which is, according to some experimenters, a kind of alteration of the fibrin from which the cruor separates; and from them it would appear that there was more fibrin than cruor. It should also be considered that generally in the first stage of inflammation, before it has undermined the powers, there is an increased activity of hematosi; of this state the examples are numerous in which the patients are able to bear enormous losses of blood, and such instances are more frequently met with in certain shades of phlegmon of the viscera than of the cellular tissue.

When the period of resolution and suppuration arrives, the urine and sweat contain a mucous matter or a kind of detritus of the fibrin of the blood, resembling pus, for during that period and the absorption of the pus, this matter is found in almost all the excretions. At a later period, when the unopened phlegmon has caused the formation of an internal abscess which infects the blood, the composition of the latter is changed and becomes impregnated with virulent principles which our powers of investigation have not yet been able to isolate, but whose operation is that of remarkable irritation. In all such cases, whether the modifying agents of the blood render it more cohesive and fibrinous, or the fibrin is tainted with intangible putrid matters, we possess no specifics to oppose them; all we can do is to combat the inflammation.

With regard to the prognosis, you ought to be now able to state it as well as myself. If the phlegmon is small and limited it is a purely local phenomenon which only induces a slight degree of pain, by the dissemination of the nervous irritation, without any danger of being communicated to the interior; but if it be sufficiently extensive to produce fever, a thousand chances are possible. The disposition to visceral phlegmasiæ that always exists more or less when a considerable irritation obtains in any point, may cause the inflammation to become concentrated in one of them. It is this that frequently mars surgeons when about to perform some great operation, and they therefore take care to examine whether the patient has been properly prepared for it. This point has been attended to by all our leading surgeons since the time of Ambrose Paré; they have always prepared patients for operations, that is, they have diminished the inflammatory tendency in them. Thus when the latter exists and a phlegmon appears, the dissemination of the irritation and the fever may give occasion for the development of some internal phlegmon of greater or smaller consequence; and this consideration should always form one of the features of the prognosis. Moreover it should be grounded on the extent of the inflammatory focus, on its profundity

and its vicinity to the principal organs. Inflammation of the parotids is always a serious matter on account of its proximity to and multiplied nervous communications with the brain; indeed all the phlegmasiæ of parts near the brain require to be strictly watched. The same applies to the phlegmon that exists in the cellular tissue around glandular organ. Another elementary feature of the prognosis is the situation of phlegmon; if it be subaponeurotic it may have serious consequence, and every effort should therefore be made to arrest it at the onset; those situated on the margin of the anus are also to be feared on account of the fistulæ they may leave behind. When the phlegmon has not been opened and has passed into several centres or fistulæ filled with ill-conditioned pus, the danger is very great, especially if internal irritation already exists, for without this last condition there is never a fatal termination; and again I say, no one dies of external but of internal disorder.

What is the treatment of phlegmon, and to what are the indications to be followed in it reducible? You must first of all endeavour to annihilate it in its commencement—a thing not generally understood, for many have an idea that a species of fever is necessary in order to hasten the maturity of the phlegmon, which however is not at all essential. You may reduce a phlegmon to a purely local phenomenon, and regard the fever and visceral phenomena that accompany it, as altogether superfluous and without any utility to its progress. On the contrary, you should endeavour to do away with all these additions, and you will accordingly bleed generally, if there is plethora or congestion in the viscera, or too rapid pulse: you will apply leeches, and this easily, since the disease comes directly within the ken of your senses. Even when the phlegmon is critical you should still attack it in this manner—a precept, I am aware, opposed to that of old surgeons, who thought a critical phlegmon should be respected; but this is folly. In fact, where is the wisdom of allowing a disorganization of the parotid glands, for instance, to go on endangering the brain: or a phlegmon that may perhaps destroy the testicles or lay bare the rectum? No, you must combat inflammation wherever it predominates, and prevent it from ravaging all around it. Last year I made a notable application of this principle in the instance of a young lady who had been seized with measles, which was treated with general and subsequently with copious local bleedings. She appeared to be convalescent, when all at once she felt pain of the left eustachian tube and ear; inflammation of the parotids supervened and increased rapidly, the patient becoming a few minutes as pale as the sheets of her bed; the respiration was laborious, and all the signs of fatal cerebral con-

gestion were imminent. Notwithstanding the paleness and the smallness of the pulse, I had thirty leeches applied to the gorged part; the following morning the lady was cheerful and the parotids less painful. I applied revulsives to the extremities; but the next day the same phenomena as before re-appeared. I again ordered twenty leeches, and was even obliged, regardless of the fears of the relatives and those about her, to make a third application of the same number; they, however, relied on me, and allowed me to do as I pleased. At last the cerebral symptoms ceased, the parotid suppurated and the patient was saved. Had I been anxious to spare her powers and preserve her blood under the pretext that she was of a lymphatic temperament, she would have infallibly sunk under the cerebral congestion. But I was too well persuaded that the phlegmon need not be complicated with sympathetic phenomena and a general effort to bring the pus to maturity, and on this idea was founded the resolution with which I persisted in the same line of treatment. I might even have been successful enough to cut the disease short, as I have done before; but it is sufficient good fortune to be able to withdraw such fearful additions to the phlegmon as those above mentioned. In this manner it is that you should act whenever the phlegmon is threatening the viscera; and when it has attained them, address your remedies directly to them. You should proceed in like manner when, not having yet ascertained the existence of the phlegmon, you are only contending with an internal inflammation. Into the details of remedies I shall not go, my place only being to lay down the fundamental indications. When the phlegmon has given rise to an abscess, you have recourse to a surgical operation. It sometimes happens that mercurial frictions or electric sparks have succeeded in dispersing the abscess in instances where patients have been unwilling to undergo the necessary pain of opening; pressure has also been effectual to the same end, when the phlegmon is situated over a firm tissue, on a joint, for example.

To one point more I must draw your attention—to chronic and latent phlegmon. Nature sometimes produces inflammation of the cellular tissue without any fever, and in so latent a manner as scarcely to cause it to be announced by some trivial pains, and even fluctuation may advance before the patient discovers the disease. This is more particularly seen when the pus comes from some distant point, as in inflammations involving the bones of the vertebral canal and pelvis; it is also observed without any affection of the bones and in a successive manner in various parts of the body. The suppuration consequent on this phlegmon produces abscesses which have received the epithet of “cold”, for which a distinct theory has been erected. Nevertheless these ab-

abscesses should be treated just as the others are: if we succeed in detecting them in good time, we should attack them, as we do more acute inflammations, with local bleedings, by which the inflammatory movement is readily suppressed and the collection of pus prevented; this I can assert on my own experience. But I am bound to confess that more frequently I have been less fortunate, and have been surprised by the fluctuation before any indication, any pain in the lumbar or dorsal regions led me to suspect a phlegmon. This, however, did not deter me from treating it with large applications of leeches and afterwards with compression and numerous drains, but chiefly with moxas around the bony phlegmasia: from all which a cure is generally the result. These kinds of deposits are therefore not so formidable as they have been hitherto considered: if, as I said, the inflammatory movement be suppressed by antiphlogistics and compression used after opening them (if that be necessary), we have nothing to fear from absorption, unless the patients have an unfavourable predisposition, such as the scorbutic, or are labouring under some chronic affection of the viscera—for *that* is always the main point to be determined. Error is sure to follow if we consider the abscess alone; this is an unvarying rule—never judge of the serious nature of a disease or of its curability unless you have considered it with reference to the great organs of the system.

I now proceed to depict to you inflammation as it is seen in the articular tissues, where it falls immediately under our external senses. This forms part of the plan with which we started, namely, to investigate and study inflammation as we see it externally, before proceeding to treat of it when in the hidden parts of the economy. It is only in this manner that we can acquire a rational and well founded conviction as to the effects it develops in the general system, observing first what it produces in the exterior of the body, and then tracing what it produces in the interior.

Articular Inflammations—Arthritis and Gout.
—Inflammation of the articular tissues is exhibited in a variety of shades and a series of degrees, decreasing as it were from acute to latent phlegmon, from the most intense serous phlegmasia to obscure sub-inflammation. It is one of the most instructive inflammations we can study. It may affect the entire joint from the cellular tissue underneath the skin to the articular capsules or the bone itself. The cartilages do not undergo an actual inflammation, but a kind of detritus. You may imagine that in tissues so various in texture and so diversified in vitality, inflammation presents extreme differences, and you need not be astonished that so many specialties and pathological entities should have been erected on these differences,

Of all the causes of these inflammations one only is fundamental—cold; the others are merely preparatory or determining causes—preparatory to certain forms of phlegmasia; determining, when on the application of cold the disease breaks out.

Articular inflammations are divisible into two series: the first, which are the most acute, and may also become chronic, is known under the name of arthritis; the second, less acute and more limited, is denominated gout. Arthritis is the more common of the two. It ordinarily attacks young people, and requires no further predisposition than a general inflammatory tendency. It manifests itself in several articulations at once, and is always accompanied with some varied intensity of fever. The other form, or the gout, is most commonly observed in persons advanced in age. It commences in a single articulation, and that generally a small one, and is frequently preceded by a phlegmasia of the digestive canal propagated into the liver. Do not, however, believe that this circumstance constitutes a disease apart. In my opinion arthritis is to gout what acute gastro-enteritis is to chronic gastro-enteritis. When in the course of life, one, two, or three acute gastro-enterites have been predominant, none but chronic ones afterwards prevail. So it is in arthritis: after two or three attacks of the disease in its acute form, it no longer exists, but gout is the disorder.

The predisposition that I assign to gout, and which consists in a chronic phlegmasia of the stomach, and particularly of the duodenum, reacting on the liver and disturbing the biliary secretion, is not the only cause of it; for it does not produce it in hot climates, or if gout does exist there, it is because cold has accidentally prevailed. In fact, in almost all hot latitudes there are breaks in the land, mountains and valleys that expose the inhabitants to alternations of heat and cold: but if no such alternations occur, the chronic gastro-duodenitis may go on for ever without producing gout.

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LECTURES

ON THE

PHYSICAL EDUCATION AND DISEASES OF INFANTS,

FROM BIRTH TO PUBERTY.

By DR. RYAN,

Delivered at the Medical School, Westminster Dispensary, Gerrard Street, Soho;

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LECTURE XL.

—
Congenital Diseases of Internal Parts—Malformations and Diseases of the Digestive Apparatus.

GENTLEMEN—In the preceding lectures I described the vices of conformation and congenital diseases of the brain, of the dif-

ferent outlets of the body, of the skin, the deformities of the hard and soft parts of the trunk and extremities; and I have now to treat of those of internal organs. I shall commence with those of the digestive system.

On a former occasion I enumerated the vices of conformation of the mouth, lips, soft and hard palate; including hare-lip, cleft-palate, of the tongue, and malformation of the frænum, and I shall now consider the congenital diseases of these parts and of the rest of the digestive organs. Hippocrates announced this wise axiom which has long been received and is now universal in this country—"As the earth is to vegetables, so is the stomach to animals." And this is forcibly exemplified in infants, whose digestive system predominates in the first period of life. When this is severely disordered or diseased, the health and life of the infant are very much endangered. We hold then the above axiom—"Ut terra est arboribus, ita sit ventriculus animalibus;" and we therefore consider the disorders of the digestive system with great attention.

Diseases of the Mouth.—Congestion of blood in the buccal mucous membrane including the whole surfaces of the cheeks, tongue and fauces (throat), has been observed by M. Billard in new born infants. This able author gives the following description of the diseases of the mouth, which is so accurate that I shall transcribe it; as it is the best account of this portion of pathology. Among the inflammations of the alimentary canal he places those of the mouth in the following order:—

Stomatitis—Stomatitis—Inflammation of the Mouth.—It is impossible to give a general description of stomatitis, because each of the tissues which enter into the conformation of the parietes or walls of the mouth may become the special seat of inflammation. Disease in each tissue presents peculiar symptoms, so that the symptomatology is different. I shall therefore successively describe the following varieties of stomatitis:—

- Stomatitis erythematous,
- with alteration of secretion, (*muguet*),
- follicular, (*aphthæ*),
- ulcerous,
- gangrenous, (*gangrene of the mouth*).

I. Erythematous Stomatitis.—The congested state of the lining membrane of the mouth in new born infants disposes it to become the seat of erythematous stomatitis, which is generally characterised by redness, heat, and sometimes dryness of the mouth and tongue. It often co-exists with inflammation of the stomach and bowels, and is rarely accompanied by fever in very young infants, though this symptom is common to infants from the seventh to the ninth month. This inflammation is sometimes confined to

a part, or extends to the whole mouth, and even to the lips, which swell, excoriate, and sometimes become the seat of *herpes labialis*. When the disease persists for a long time, it often causes profuse salivation, especially in infants under the seventh month. In such cases the flow of saliva is often very abundant.

Simple erythematous stomatitis readily yields to emollient gargles and a milk diet; and when it is complicated with inflammation of the stomach and bowels (gastro-enteritis), it disappears by the remedies which remove such inflammation.

It is always to be recollected that the mouth is the commencement of the digestive organs, and that inflammation in any part of the tissues that compose it may extend along the œsophagus, into the stomach and bowels.

2.—Stomatitis, with alteration of Secretion—Muguet—Millet.—This species is often confounded with another, aphthæ, or thrush, though very easily distinguished from it. Muguet presents three different aspects; 1, in the form of very small white points spread over the tongue and inside of the mouth; 2, in the form of larger or smaller patches; 3, in the form of a membrane, which covers the entire tongue and inside of the mouth. Sometimes the points or patches are yellow or reddish, which colour is caused by the contact of bile or a sanguineous exhalation from the mucous membrane affected.

The pointed, creamy, and membraniform excretion is generally preceded by erythematous inflammation of the surface of the tongue or the lining of the mouth. When this inflammation continues one, two, or three days, we observe on the sides of the tongue and lips small white points or papillæ, which cover those of the membrane, to which they adhere. M. Billard has most carefully examined such excretions, and never found them under the epithelium, the surface of which is always their seat. They surmount the membrane, they cover it like mucus, and muguet is really a morbid secretion.

This is the first form of the disease, and is always preceded by inflammation of the mouth. If the inflammation stops, if the secretion which accompanies it is suspended, the little white spots disappear, and the disease is considered distinct or benign. But the inflammation very often advances, the white spots unite and form a large patch either on the surface of the tongue, lips, or cheeks, or covers the whole lining of the mouth. These patches become thick, exfoliate, or detach themselves, leaving the surface inflamed, which secretes materials of a new concretion, or the inflammation ceases. When the whole of the mouth and palate is covered with membrane the muguet is termed *confluent* or *malign*. The papillary muguet usually occupies the tip and sides

of the tongue, the muguet with patches is seen on the internal surface of the lips and cheeks, and the membraniform muguet is situated on the base of the tongue and palate. We can explain the causes of these different forms or aspects of the disease. The papillary muguet is situated at the tip of the tongue, or rather on its numerous papillæ, which secrete drops of mucosity, and speedily concrete or harden. As the papillæ and villosities of the buccal mucous membrane are larger on the palate, base of the tongue, and on the cheeks, the mucus is secreted in a sheet or layer, concretes in the same manner, and assumes the membraniform appearance above mentioned.

We shall now inquire into the nature, causes, symptoms, complications, and treatment of muguet, or stomatitis with alteration of secretion.

The disease is most common to infants; it may extend along the whole alimentary canal from the mouth to the anus, and also into the lungs and along all mucous membranes. The mucus is more tenacious or adhesive than usual, similar to what we observe in chronic bronchitis or winter cough of aged persons. The disease is sometimes seen in adults. Infants at the breast are more subject to it than those of a more advanced age. Perhaps there is something in the constitution of very young infants which predisposes them to this modification of inflammation. It is most common to delicate infants who are crowded in the same place, and to those who are improperly fed with artificial food or deteriorated breast milk. The disease is more frequent in France than in England, and it equally prevails at all seasons. M. Billard, who investigated the disease better than any of his predecessors, informs us, that it always prevailed with an equal degree of intensity at the Foundling Hospital of Paris (Hospice des Enfants Trouvés). Thus, during the quarter ending in January 1826, he observed out of 290 patients, 34 cases of muguet; in the April quarter, out of 235—35; in the July quarter, out of 213—101; and in the October quarter, out of 159—48.

The disease does not appear to be contagious, as MM. Baron and Billard have frequently observed healthy infants drinking from the same cup as the diseased, without contracting the disease. From all that has been stated, we may conclude, that the causes of muguet are: early infancy, bad alimentation, the congregation of a great number of infants in the same place, debility, inflammation of the buccal mucous membrane, and finally, the disposition which mucous membranes of infants present when inflamed to become covered with creamy and membraniform concretions.

When the disease is mild or partial, there is scarcely any fever; but in the severe forms, the skin is hot and dry, thirst is urgent, and the pulse frequent; that is to say, fever is present. This is particularly the case when

the disease extends to the stomach and bowels; or along the mucous membrane of the wind-pipe to the lungs. The voice and cry of the infant are affected when the palate, tonsils, larynx, and trachea are implicated. The voice is hoarse, and the cry dull in some cases.

It appears by the statements of M. Billard, that muguet of the mouth is often complicated with other inflammations. He found, out of 50 cases of muguet of the mouth in infants who died of the disease, two were affected with inflammation of the cerebro-spinal apparatus, four with inflammation of the skin, twelve with inflammation of the respiratory and circulatory system, and in thirty-two, the digestive apparatus was inflamed. It follows from these facts that inflammation of the digestive apparatus is the most frequent complication of muguet, whilst the other inflammations are merely accidental. This conclusion is also confirmed by the fact of the strong sympathy between the mouth and other parts of the digestive organs. Among the thirty-two cases in which the digestive organs were inflamed, there were ten in which the stomach was free from disease; in six the large intestines, and in four the small, were more or less inflamed. As to the other twenty-two, they presented inflammation of the œsophagus or gullet, of the stomach, and of some portion of the small or large intestines.

Treatment.—When muguet is simple, distinct or benign, the mouth should be washed frequently in the day with a piece of charpie or lint wetted with gum water. The bowels should be regulated. M. Guersent employs a mucilaginous decoction with a fourth part of Labarraque's solution of the chloride of lime to wash the mouth of the infant; and he prefers this to solutions of borax and sulphate of zinc. He thinks it equally preferable in lavement to lime water, which often irritates the intestines.—(Dict. de Méd. in 21 vols., art. *Muguet*.) If this plan fails, we may use gargles with alum. All gargles should be sweetened.

When the disease is confluent or complicated (black thrush), with inflammation of the digestive tube, or any other important organ, it should be combatted with the proper means for such concomitant malady. This also applies to buccal and gingival inflammations, or those of the cheeks and gums. These form more or less abundant concretions, which cover the whitish or yellowish pellicles, the gums, and internal surface of the cheeks. Many authors have described this inflammation under the name of aphthæ, others have termed it pelliculous, creamous, stomacacous inflammation, &c. All these varieties ought to be referred to stomatitis, with alteration of secretion, and should be treated by the same therapeutic means. The pathology of aphthæ will prove the difference between the diseases.

3. *Stomatitis folliculosa—Aphthæ—Thrush.*—Pathologists have long disputed about the nature of this disease. It would occupy

too much time to enumerate the different conclusions in the works on this subject; and it is sufficient in my opinion to describe the modern.

Bichat, whose genius has revealed all the advantages that can be derived from the study of the anatomical characters of diseases to establish exactly their differences and their analogies, has asked the following questions in terminating his chapter on the mucous chorion. "Are aphthæ an affection of the mucous chorion? Do they belong to the papillæ? Are they seated in the glands? Are they an isolated inflammation of the glands, whilst catarrhs are characterized by a general inflammation of so considerable an extent as the mucous system? All these questions deserve to be examined; M. Pinel has felt the void of pathological anatomy on this point." (*Anat. Gen.*, t. iv.)

M. Billard has answered all these questions, and has demonstrated that aphthæ consist in an inflammation of the muciparous follicles of the mouth.

"The muciparous follicles," says that lamented pathologist, "of the buccal mucous membrane, invisible in an ordinary state, remain hidden in the substance of the membrane, and supply by their infinity of number the smallness of their size; but when they are inflamed, engorged, and tumefied, they appear upon the internal surface of the lips and cheeks, on the pillars and vault of the palate, or on the inferior and lateral parts of the base of the tongue, in the form of small white specks or points, offering sometimes a coloured spot in the centre, slightly prominent, and often surrounded by a very slight inflammatory circle. These follicles are either isolated and less numerous, or multiplied and spread on all parts of the mouth. They can sometimes be felt with the finger before they can be distinctly seen. They are often not confined to the mouth, but extend into the œsophagus, stomach, and intestinal tube." (*Traité des Maladies des Enfants*, 1833.) The inflammation of the follicles may be very slight, and continue for some time without inducing any serious disease, or they may undergo the following alterations:—

The follicular spots may enlarge and preserve the primitive round form, they may soften in the centre, and give out a white or puriform matter. This is the second stage or ulcerated period of aphthæ. The elevated points are not tubercles, vesicles or pustles, as authors have alleged; but according to M. Billard, they are evidently the muciparous follicles, as their seat, constant form, and central orifice demonstrate. They are perfectly analogous to those which we see in the stomach, small intestines, the cæcum and colon. "If this be the case, says Billard, 'why doubt that the ulceration of these follicles is not the result of their inflammation? What reason is opposed to consider aphthæ as an inflammation of the mu-

ciparous follicles of the buccal cavity, since nobody doubts at present that the round ulcers of the small and large intestines are consecutive of inflammation in the glands of those parts, and which have the greatest analogy with those of the mouth?'"

When an inflamed follicle bursts, it is no longer prominent; it is a superficial round ulcer, with its edges tumefied, and almost always surrounded by an inflammatory circle. It often happens that the centre and edges of this slight ulceration secrete a pul-taceous, whitish, matter, adherent like a crust, which is sooner or later detached, and falls into the saliva of the infant.

Isolated aphthæ are generally situated on the internal surface of the lower lip, the fræ-num, or bridle of the tongue, the internal surface of the cheeks, and upper parts of the gums, when the teeth have not pierced them.

If aphthæ are numerous and contiguous, their edges approximate, the creamy matter they excrete extends from one to the other, and forms a layer, more or less extensive, and more or less thick. It is in this case that aphthæ may be confounded with muguet, but we can always distinguish them, in recollecting the history of the development of the inflamed follicles, and that a solution of continuity or breach of surface does not exist in muguet; besides, the excretion which accompanies aphthæ is always consecutive to ulceration, and is always observed on the internal surface of the lips and cheeks; whilst the white specks in muguet appear upon the lateral parts and towards the tip of the inflamed tongue, and extend to the surrounding parts.

It sometimes happens that aphthæ become covered with a brown crust, which is produced by the escape of blood from the ulcerated surface beneath it; and this has been mistaken for angina maligna, and gangrene. This error would lead to dangerous practice, the use of stimulants, such as ammonia, wine, quinine, &c., instead of leeching, purgation, and antiphlogistic remedies. The result would be that simple ulcerations might be speedily converted into gangrene, which would very much endanger life. There is good reason to suppose that Van Swieten, Rosen, Underwood, and many others, have made this mistake.

When the aphthous inflammation is slight, and when it readily yields to remedies, the ulcerations rapidly heal without leaving any trace behind them.

It appears, then, from the preceding statements, that aphthæ of the mouth and other mucous surfaces present two periods in their inflammatory development—they consist in small white tumours, or these tumours ulcerate, or become gangrenous.

Aphthæ have been compared to miliary eruptions on the skin, by Boerhaave, Van Swieten, Sauvages, Arneman, Willan, Bateman, and others; but if they depend on inflammation of the muciparous follicles, of which I think there is not the smallest

doubt, they cannot be compared to the vesicles of miliary eruption, from which they totally differ.

As we now possess a correct view of the pathology of aphthæ, we may inquire into their causes, general symptoms, complications, and treatment.

Aphthæ are not peculiar, though most common to infants: adults are also liable to them. This led Bateman to propose the division, *aphtha lactantium*, *aphtha adultorum*. He was right: the disease may attack infants at the breast, and adults also. The disease appears in the latter, when the last stage of phthisis arrives, and also in many other chronic diseases. The disease is most common to feeble, lymphatic, or scrofulous infants. When the lymphatic system predominates, it is readily excited by a bad alimentation, by vitiated air in ill-ventilated situations, or where a large number of infants are crowded together. Such is the result of the researches and considerations of Raulin, Lapeyronie, Baudelocque, Auvity, Sanponts, and many others. It therefore follows, that the follicular apparatus of the whole alimentary canal acquires an increase of vital energy at the same time as the lymphatic system; hence this disposition of infants to inflammation of the follicles, and to the alterations which succeed it in different portions of the digestive tube.

M. Billard has observed, at the Foundling Hospital, that whilst muguet prevailed to the greatest extent among the new-born infants, aphthæ were rare before the first dentition. M. Denis is also of this opinion, but experience warrants me to draw a different conclusion as regards the appearance of the disease in this country. Aphthæ are exceedingly common to new-born infants, more especially when spoon fed, or when applied too often to the breast. It occurs as early as the third day, is common during the first month, and less frequent towards the period of the first dentition. M. Billard accounts for his conclusion by stating, that if we follow the anatomical development of the lymphatic glands and follicular apparatus of the digestive tube in the new-born infant, we shall see that these glands are scarcely designed in the new-born infant, but rapidly increase during the first four or five months of life, so that the development of the lymphatic system attracts with it, if I may use the term, all its dependencies, impresses on the constitution of the infant a particular idiosyncrasy, from which results its predisposition to inflammation of the follicles and muciparous glands. Thus anatomical and pathological observation are found to accord. Notwithstanding this statement, we see aphthæ in very young infants, but certainly not so severe as at the fourth or fifth month, or during the first year. It has been remarked by Underwood, Billard, and others, that there is no fever accompanying aphthæ, though the mouth may

be so hot and parched as to irritate the nipple, and oblige the infant to take it with repugnance or precaution. The absence of fever is explicable by modern pathology. Pinel has shewn that it is only after an alteration of the mucous membrane of the digestive apparatus, or what he terms adeno-meningée, appears. He drew this conclusion after his numerous observations of the dead bodies of those who fell victims in the different epidemics of mucous fevers. The state of the mouth, œsophagus, stomach, and intestines, were, according to him, well worthy of remark as to the affection of the mucous membrane of these parts. Nothing was more common than to find aphthæ in the throat, that is to say, the detachment of shreds similar to the epiderm which covers the mucous membrane. (Nosograph. Philos. t. 1). The more recent observations of other pathologists have amply attested the truth of this conclusion. It is also a certain fact, that there exists at the same time a similar alteration in the follicular apparatus of the intestines, and in cases of infantile remittent fever, this is invariably observed.

When aphthæ are distinct, there is little inconvenience during the first period of their development; but it is not so when they are confluent. We then observe that the infant becomes pale, emaciates rapidly, has an abundant secretion, and vomits every thing it takes. This results from the extension of the disease to the œsophagus, stomach, and intestines, complications the most frequent and fatal. We also occasionally observe regurgitations and eructations which give out an acid odour, which is often to be ascribed to the milk the infant sucks or drinks, which the diseased stomach cannot digest, and it is vomited when it begins to undergo decomposition. This acid odour is exactly similar to that of milk turned by heat, or by vinegar. The stomach of the infant is very often disposed to secrete an acid gastric fluid, and various acids, according to some modern pathologists, and this will much more satisfactorily account for the acid odour of the matters vomited or discharged by the lower bowels, than by referring it to the acidity or alkalinity of the humours of the infant. It is not the acidity of the humours that causes the acid odour of the food vomited by persons who dine on indigestible diet, or when digestion is interrupted by a vivid mental emotion, the motion of a vehicle or of a ship.

When aphthæ extend to the intestinal tube, there will be irritation, griping, and diarrhœa, and the discharges from the bowels are so acrid as to irritate the parts about the anus, which become erythematous, red and covered with white specks, similar to the primary disease in the mouth. There is no difficulty in explaining the presence of aphthæ along the whole tract of the mucous membrane of the digestive tube, from the mouth to the anus, or on the vagina or

other portions of the mucous membrane, nor on the derm or skin when irritated, as this tissue is, according to many of our ablest general anatomists, analogous to, or continuous with, the internal lining or mucous membrane of all the passages of the body.

Aphthæ of the mouth are accompanied by pain, as we may suppose by the cries of the infant, its insomnia or want of sleep, its peevishness and disinclination to irritate the mouth by taking food. When the disease extends to the throat, and causes swelling of the tonsils, inflammation of the lining membrane of the windpipe, which is continuous with the mouth and whole digestive tube, the cries of the infant are remarkably altered, and it is this that has led M. Gardien to say, that infants manifest their pains more by hoarseness and wheezing than by real cries.—(*Traité Complet d'Accouchemens, &c.*)

Having now described the pathology of this disease, it remains for me to enumerate the symptoms.

Symptoms.—These consist of an eruption of small white specks, single or confluent, that is, running into each other, which are not vesicles or pustules, which appear on the tongue, lips, cheeks, gums, uvula, palate, and tonsils. They usually soften in the centre, and discharge a glutinous mucus, which forms a thick whitish crust, adhering at first most tenaciously, and falling off without inducing an eschar on the parts beneath. In some cases, the lining membrane of the mouth and throat and the surface of the tongue become covered with patches of a loose ragged membrane, hanging from these parts, and of a dull white, greyish, or reddish colour. There is difficulty of mastication, deglutition, and respiration, in some cases; and the disease may extend to the œsophagus, stomach, and throughout the whole alimentary canal, forming gastro-enteritis, when mucus is evacuated in large quantities by vomiting and stool; at other times, to the trachea and bronchiæ, and mucus is expelled by coughing. Aphthæ often fall off in the space of ten or twelve hours, but they remain attached for several days, and frequently a separation and reproduction take place several times before the termination of the disease. In severe cases the ulcers assume a livid colour, and become gangrenous; in others the surface of the tongue between the ulcers is of a bright red colour. The disease is most common to children in early infancy, though it may appear at any subsequent period of life. It was formerly considered endermic and sometimes contagious; but this pathology is, I believe, exploded at present.

At the commencement of the disease the infant experiences a disinclination to the breast, and is fretful whenever it is applied. Its appetite is bad, and its motions are depraved, though in some cases there is scarcely any indisposition. In others there is much

feverishness and irritability, the mouth becomes hot and tender, the nipples of the nurse become painful and sometimes excoriated or chapped, from the contact of the infant's mouth. The disease is slight when confined to the mouth; but when it extends to the œsophagus, stomach, and bowels, there will be frequent vomiting and diarrhœa, and the last disease irritates and excoriates the lower bowel called the rectum, and the fundament, which become covered with spots like those in the mouth. It does not follow however, that in this last case the internal surface of the mucous membrane throughout the whole digestive tube is affected, as dissection has shewn the contrary, and the sympathy between the mouth and lower bowel would account for the affection of the latter, though the intervening portion of the tube might be free from the disease, just as we observe picking of the nose and lips excited by worms in the rectum.

The predisposing causes of aphthæ are debility, exposure to impure air, use of improper food, a lymphatic temperament and debility.

The exciting causes are irritation of the mouth, by allowing the infant to take the breast, or suck a prepared teat or shield too often, and very frequently derangement of the bowels.

Treatment.—Indications. 1. To moderate or remove the inflammation. 2. To produce a separation of the aphthæ and to heal the superficial ulcers.

The first indication will be accomplished by frequently washing the mouth with lint or soft sponge firmly tied to a small piece of wood, or whalebone, and warm water alone, milk and water, decoction of marsh mallows linseed, barley or any other mild mucilaginous substance; and also to apply the vapour of such decoctions or of warm water to the interior of the mouth. The bowels are to be opened with appropriate medicines. It will also be necessary not to lose sight of the state of the general health of the infant, which may result from impure air or improper alimentation. Infants badly nursed or deprived of sufficient food become rapidly feeble; and we should therefore remove all causes of debility which affect the glandular and follicular systems, always attending to the state of the digestive organs, and taking care not to irritate them by stimulants or the injudicious employment of tonics. These means are sufficient for the cure of the benign form of the disease.

When the aphthæ remain stationary, and are surrounded by inflammatory circles, a leech or two applied to each cheek, with a warm bath, will be necessary, in addition to the above mentioned remedies, to combat the inflammation. The warm bath will determine the blood to the trunk and extremities, lessen it in the different parts of the mouth, and thereby diminish the inflamma-

tion which causes aphthæ. As soon as the inflammation is subdued, and that the aphthæ remain adherent after the employment of emollient lotions, we should use stimulant gargles to detach them. We thus fulfil the second indication of treatment. Borax and honey, or *mel boracis* is an old remedy, but one much too stimulating, more especially as it is in general applied too rudely with the finger covered with a piece of muslin. A better application is composed of one drachm of borax, one ounce of honey, and half-a-pint of water, and this should be gently and frequently employed in the manner already mentioned. Others prefer equal parts of honey of roses and barley water, with a few drops of dilute sulphuric acid. It is often beneficial to touch the ulcerated surface with a piece of sulphate of alumin, with a view of exciting a new action in the ulcerated parts, and to dispose the inflamed surfaces to cicatrise. Alum is an old remedy, and was first employed by Aretæus in the treatment of chronic inflammations of the mouth and pharynx. This medicine was lately recommended by Mr. Mackenzie, of Glasgow, and M. Bretonneau, of Tours, to detach the effusion of the lymph on the soft palate and pharynx in the first stage of croup. It is always necessary to employ it with caution in aphthæ, and to alternate it with emollient gargles, so as not to exceed the degree of irritation which we wish to obtain with this medicine. If used with reserve and proper caution it accomplishes the same result as borax and sulphate of zinc, which are much more excitant. We should also employ a proper solution of chloride of lime or soda in a mucilaginous fluid, as recommended in muguet: a drachm of the solution of either chloride may be mixed with a pint of barley water and properly sweetened. When the infant is irritable, and deprived of sleep, it should have an anodyne, as syrup of poppies, sedative solution of opium, the preparations of morphia, henbane, &c., in appropriate doses. Great caution is necessary in exhibiting emetics and purgatives, lest there be gastro-enteritis.

If there be no reason to suspect this complication, the bowels may be opened with castor oil, almond oil, manna, magnesia, or calomel; and when the disease is solely confined to the mouth, and continues for several days, it will be necessary to give a course of alterative medicines, such as three or four grains of the *hydrargyrum cum creta* (chalk with mercury) at night, and a teaspoonful of castor oil every second or third morning. The alterative powders advised for constipation are also efficacious. The diet of the nurse should be mild and nourishing, and all stimulating articles avoided. All these remedies will sometimes fail, and in such cases change of air is the last alternative. The country or sea air usually acts very favourably in all cases of chronic

disease in children. A nourishing diet, as mentioned when describing artificial food of infants, and for scrofulous children, is also necessary.

When the stomach and intestines are implicated, the treatment for gastro-enteritis is requisite, which will be described under this head. If the aphthæ terminate by gangrene, they are to be treated by the means which will be mentioned in the article *Gangrenous Stomatitis, or Aphthæ*. If they are complicated with or replace a cutaneous disease, by warm baths, frictions on the skin, and the means already advised. When diarrhoea is present, it is to be treated as stated when describing that disease.

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DISEASES OF THE GENITO-URINARY ORGANS.

(Continued from p. 604.)

Organization of the Urethra.—The urethra is lined by a mucous membrane of a light rosaceous colour, connected with the surrounding spongy body by a dense cellular tissue. It is continuous with the mucous membrane which covers the glans penis and prepuce, anteriorly, and with that of the bladder and excretory ducts posteriorly.

The urethra is of a pale white colour, except at its orifice, where it is of a vivid red. It is furnished with numerous lacunæ which are formed by the mucous membrane, constituting small sacs or folds, for the purpose of secreting mucus, to prevent the irritation of the urine in its passage from the bladder. These lacunæ are directed from behind forwards, presenting their apertures towards the orifice of the urethra; one of these is very large in the glans penis, and is called the *lacuna magna*. A projecting column extends from each of these, from before backwards, and these columns converge towards the median line, where they form a kind of raphe or groove, which is particularly apparent in a line passing from the *lacuna magna* along the upper surface of the canal. The urethral lacunæ or folds, are estimated at about seventy in number.

The external surface of the urethral mucous membrane is connected with various tissues in different parts of its course. In its first or prostatic position, it is separated from the gland from which it derives its name, by a layer of cellular tissue. In its second or membranous part the fibrous layer is continued from the first portion, and the canal is strengthened by muscular fibres and the triangular ligament as above described. It has been already stated, that this portion of the urethra is not so thin or feeble as is generally imagined; nor is it so commonly the seat of false passages as some surgeons have asserted. It appears by recent statements that the bulbous portion is much more liable to such injuries, because the

stricture is usually situated at its commencement, and consequently the pressure of an instrument will be anterior to it, and may injure the membranous portion.

When the enlargement is at the commencement of the spongy part, then that position will be more liable to be the seat of false passages than the bulbous. It is also to be remembered, that there is sometimes a semicircular band in the bulbous portion, formed by the fibrous sheath at the commencement of the groove of the bulb, and is particularly marked, when the spongy tissue is void of blood. This band is formed, according to Amussat, by the fibrous neck of the bulb, and not by the perinæal aponeurosis, as stated by Bell and others. When the mucous membrane which surrounds the spongy and membranous parts, is raised with ease, we observe that the membrane is very thin and adherent, especially about the prostate gland, and that under it, there is another membranous layer immediately over the spongy tissue. This layer is the fibrous membrane of the spongy tissue, is continuous with the external one, and forms a fold around the opening of the spongy tissue; and it is this fold that produces the band of the bulb already alluded to, and explains the reason why the extremity of a sound is arrested, and why false passages are much more common than in the membranous portion. It is important to state that the membranous portion presents no obstacle in its normal condition; but when the prostate is diseased, there is a demarcation between this body and the commencement of the membranous portion. If we pass the finger on the part near the prostate, the crest is depressed, and the finger is arrested by a transverse band which prevents its entering the bladder. When we raise the mucous membrane which covers these parts, we find in the crest the two ejaculatory canals which run between this membrane and the prostate, which raise the mucous membrane and cause the form of the crest, on the side of which the membrane adheres, firmly to the prostate on account of the excretory ducts of this gland; we find in this band a muscular ring, which is the sphincter of the bladder; this is much more distinct below than in the rest of the urethral circumference of the bladder, leaving anteriorly, under its surface, a large semilunar depression, the concavity of which is directed forwards, and is divided into two equal portions by the ejaculatory ducts; immediately under the sphincter we find the transverse portion of the prostate, the sphincter of the bladder, and the mucous membrane. The demarcation between the bladder and the urethra is not well marked unless inferiorly, that is to say, where we find the transverse band superior to the ejaculatory canals, and much more posteriorly to their openings into the urethra, which disposition of parts has led M. Amus-

sat to give a satisfactory explanation of the manner in which the semen is evacuated while the urine is retained, and vice versa. He considers that the sphincter of the bladder being superior to the prostate, closes the opening of the bladder, while the ejaculatory canals remain free in the interior of this gland, the firm tissue of which prevents all compression. It also appears to him that these, in erecting themselves, push behind and above them the fleshy fibres which cover them, and form a fleshy bundle more marked here than elsewhere, for the sphincter is not distinct but in this place, and the organization about the urethral opening of the bladder is not the same in the infant and woman as in man, unless at the superior part only, that is to say, that this circumference is much thicker than the bladder, forms a flattened sphincter, but not the muscular ring similar to that which surrounds the inferior part of the vesicle orifice of the urethra in man. In fine, M. Amussat has well remarked that the arrangement of the sphincter of the bladder and of the prostate inferiorly very well explains the reason why the beak of an instrument is arrested and misled at this point, without having occasion to refer to the verumontanum, or to the very large supposed mucous lacunæ, which do not exist in the healthy state of the canal. With respect to the superior surface of the urethra it is of the same colour as the inferior, and has along its median line a series of mucous lacunæ, the openings of which are directed forwards, and are in general more marked than those of the inferior wall of the canal. The surface differs particularly from the inferior, in having no depression and being almost uniform in its whole course: the finger readily glides along it, until it arrives at the part corresponding to the triangular ligament of the symphysis, and easily passes over this. The absence of an obstacle is caused by the insensible union of the spongy with the membranous portion.

The demarcation between the bladder and the urethra is so slightly marked that the finger very readily passes over it. Much dispute exists between anatomists as to the exact point at which the urethra terminates, and the neck of the bladder commences. Some consider that the neck of the bladder is surrounded by the prostate, while Mr. Guthrie contends that it commences at the very opening into the urethra, and is a ring a little broader or thicker than the bladder itself. "It is that portion," says he, "at which the uvula is situated, the urethra being before, the bladder behind it, and the abruptness with which the opening commences, when viewed from within, appears to me to warrant the acceptance of the term, whilst the diseases which affect this part render it worthy of an accurate description. When this part loses the natural elasticity with which it is endowed, and which

it does from internal charges, the consequence of disease, it becomes firm and contracted, constituting a stricture resembling in many respects those which take place in any part of the urethra.* Mr. Guthrie also alleges that disease of this part is extremely frequent, and has been hitherto generally mistaken, and attributed erroneously to enlargement of the third lobe of the prostate gland. This he considers a very great mistake, as in his opinion the gland is by no means so often affected as has been supposed; and he says, "that no greater error has been committed in surgery, than that which supposes the third lobe, as it is called, of the prostate, to be the common cause of those difficulties of making water which occur so frequently in elderly people, and sometimes in young persons. I do not deny that a portion of the prostate may enlarge and project into the bladder, preventing the flow of urine from it; but I mean to infer that this evil takes place more frequently, and is more effectually caused by disease of the neck of the bladder, totally unconnected with the prostate, than by disease of that part, a fact I consider extremely important, because it leads to improvement in this branch of surgery, and to the introduction of more effective means of cure. A knowledge of this fact enables us also to explain how other diseases of the bladder takes place, and how other symptoms not hitherto explained, have arisen. He cited several cases in proof of this fact, and concluded, 1st, that the elastic structure at the neck of the bladder may become diseased without any connection with the prostate gland."

2nd. That the prostate may be diseased without any connection with it. His description of disease in the neck of the bladder is not only original, but highly important in a practical point of view, and I shall notice it fully hereafter.

It is considered by many anatomists, that the urethra possesses a muscular power, as muscular fibres sometimes pass in a longitudinal direction, between the mucous membrane and the corpus spongiosum, being most abundant towards the glans. These are supposed to contract on the passage of an instrument, and cause impediments to catheterism, as is well known to surgeons. Others are of opinion that this contractile power resides in the urethral mucous membrane itself, and that it is augmented by the contraction of the fibrous tissue, which is connected with the urethra; the urethra possesses a contractile power. There is no doubt but in front of the membranous portion, when we inject a fluid into the urethra and compress the glans, we observe on removing the pressure, the liquid is expelled to a distance nearly equal to that to which

the urine is ejected; and that this power is absent in those whose penis has been amputated.

It now remains for me to describe the vessels, nerves, and absorbents of the urethra. The arteries are supplied from the internal pudic, and are four in number; one proceeds to each corpus cavernosum, and two are sent to the bulb to ramify on the corpus spongiosum. It is generally supposed that the arteries pour their blood into the cells of the corpora cavernosa, and that from these the veins arise; while in the corpus spongiosum and glans, the arteries terminate in the veins, forming a plexus of convoluted vessels, frequently anastomosing, and producing a retardation of the flow of blood. The blood is returned from the penis by large dorsal veins, which unite at the root and form one large vein, called the vena magna ipsius penis, which finally empties itself into the internal iliac vein. In consequence of this peculiar course of circulation the blood being supplied by four arteries and returned by one vein, the arteries, when excited to inordinate action, pour in their contents more rapidly, than the vein can remove them, and distension of the organ must necessarily take place. It is also supposed that during coition, the distension of the penis, and the pressure of the arch of the pubis on the vena magna impede its functions and contribute in some degree to interrupt the venous circulation in the virile organ. It follows from the preceding description of the circulation in the penis and urethra, that there is great danger of hemorrhage when the urethra is wounded or cauterized, and that this should be borne in mind when we have recourse to catheterism, the employment of mechanical force to overcome obstacles in the urinary passage, and the use of caustic bougies.

The nerves of the penis are derived from the lumbo-sacral plexus, are portions of the great sympathetic; and hence the diseases of the urethra may disorder the functions of all organs more directly connected by nerves with this part; and from the universal nervous connexion between all parts of the body, may derange the whole. In this way we can explain the sympathetic derangements of all parts of the genito-urinary system, the prostate, bladder, ureters, and kidneys, the digestive pulmonary, circulatory, and central systems, induced by disease in the urethra; and also that idiopathic disorder or disease in any of these systems may derange the genito-urinary apparatus. Lastly, the absorbents of the penis are superficial and deep-seated; the former terminating in the inguinal and the latter in the hypogastric glands.

Such is the organization of the urethra in man. In woman, the structure of the urethra is similar to that of the membranous portion in man. The canal is about an inch and a half in length, and much larger

* Lectures on diseases of the urinary organs, London Med. and Surg. Jour. 1833, vol. iii, p. 267.

- than in the other sex. Its orifice is situated under the arch of the pubis, immediately before the entrance of the vagina, between two small lips. It is easily found about half an inch below the clitoris. The urethra is slightly curved in its course, it corresponds behind to the anterior wall of the vagina, before to the symphysis pubis, and on its sides to the roots of the corpora cavernosa of the clitoris. Its meatus or orifice resembles a dimple about the size of a split pea. This canal admits of much greater distention, from its greater amplitude, than the urethra of the male; and its calibre is so great, that it is very seldom obstructed by stricture or other disorganizations.

Having now concluded the anatomy of the urethra, it remains for me to notice the development of the prostate gland; as diseases of this organ will come in the course of the following inquiries, under serious consideration in a subsequent section.

Development of the Prostate Gland.—The prostate gland is not observable in the human embryo, until the termination of the second month of its existence. At this period it consists of four lobes, which are called prostates; between the fourth and fifth month the two internal and posterior lobes unite, and the gland is then composed of three portions, which between the sixth and eighth month become one substance; but if the perfect union of these three portions should not occur, the gland will consist of three parts, the centre of which is called the middle lobe; but this, according to Mr. Guthrie and other late writers, is of extremely rare occurrence. It has, however, been described by Morgagni, Epist. 41, by Mr. Hunter, 'according to Mr. Guthrie (Lectures on the Anatomy and Diseases of the Bladder and Urethra, Lon. Med. and Surg. Journ. 1833, vol. iii, page 423), and lastly by Sir E. Home. Mr. Guthrie states, that the preparation from which a drawing was made by Sir E. Home, was not anatomically examined, either by Mr. Hunter or Sir Everard, and that the third lobe was merely assumed.

"The fact of an enlargement of a third lobe can now only be ascertained by dividing the bladder and urethra in their longitudinal direction; and I shall propose to the Board of Curators to do so, for it is rather unaccountable that such men as Mr. Hunter and Sir E. Home should have had drawings and engravings made to show disease in a part which was not examined in the only way, by which the proof could be given, that it was actually diseased.

"There is an other thing no less remarkable; and it is, that it is quite clear, from the remains of Mr. Hunter's papers preserved in the colleges, that he had anticipated Sir E. Home in every point connected with this subject." (Op. Cit.). I have already observed, that this experienced surgeon has arrived at the important conclusion, that

disease of the third lobe is of extremely rare occurrence, and was erroneously supposed to exist when the neck of the bladder was in fault.

The prostate gland in the adult, resembles the form and size of a chestnut, it is about an inch in length and half an inch in thickness; it is white, hard, and solid, and is enveloped by a strong fibrous membrane. It has been already stated, that about the middle of the inferior surface of this gland, we observe an oblong rounded eminence, which terminates anteriorly in a straight elongated point, called verumontanum. This gland is very often enlarged, may become inflamed or scirrhus, and is sometimes the seat of abscess or calculi.

Pathology of the Urethra.—The urethra, in common with all muco-fibrous tissues, is liable to irritation and inflammation. The latter and its consequences are the causes of almost all the diseases of the urethra.

Gonorrhœa is the most acute and severe inflammation of the urethra, and is the most common cause of contractions of this canal. This inflammation, after having existed in the acute form for a longer or shorter period, passes into the chronic state, confines itself to a particular part of the canal, and causes thickening, induration, contraction, accidental tissues, and adhesions, which, more or less, obstruct the canal. It need scarcely be observed that inflammation changes the nature of parts, increases their sensibility, and their volume, causing the disorganizations already mentioned, as well as ulceration, adventitious bands, and caruncles.

Urethritis—Blenorrhœa.—This term is applied to inflammation of the mucous membrane of the urethra, in preference to the denominations gonorrhœa, blennorrhœa, blennorrhagia, and urethral catarrh, which signify a symptom, and express false ideas. The causes of urethritis are those which act on the urethra directly, and those that act sympathetically through remote organs. The most common or direct causes are, coition with a person affected with inflammation or ulceration of the genital organs, frequent manipulations of the sexual parts, masturbation, excessive venery with a healthy person, especially when there is inattention to cleanliness, or a great disproportion between the organs of the sexes, and when leucorrhœa, the menses or lochies are present, a contusion or compression of the perinæum, the frequent introduction of a bougie or catheter into the urethra, the injection of irritating fluids into this canal, and lastly, the presence of a stricture or foreign body in this part.

Among the internal causes, are irritations of the different parts of the alimentary canal; the appearance of a tooth has occasionally caused a discharge from the urethra, which was long since noticed by

Hunter and many others, and is sometimes observed at the period of the second dentition; ascarides in the rectum have sometimes produced a similar effect, certain aliments and medicines, such as new beer, asparagus, spices, turpentine, and cantharides may excite urethral discharge; hæmorrhoides has produced the same effects. Those subject to gastric derangement, with or without constipation, may have the genito-urinary mucous membrane in a state of high irritation or inflammation. Irritation of the air-passages also provokes urethritis; asthma, coryza, cynanche, pneumonia, &c. have terminated by urethral discharge. Urethritis is sometimes accompanied by violent cough and difficult breathing, and is arrested when the expectoration acquires a certain consistence, the cough becoming less troublesome. This coincidence frequently explains the causes of pretended pulmonary consumptions formerly attributed to venereal origin, and the epidemic gonorrhœas which was said to have occurred after the sudden change of the weather from hot to cold, which greatly increased the inflammations of the chest. It has been long known that the impression of cold air and moisture on the surface of the body, or on the parts near the genital organs, as immersion of the entire body or the inferior extremities in cold water, may induce urethritis, and increase or diminish urethral discharges.

Chronic inflammation of the bladder, calculus in that organ, or in the ureter, or in the kidneys, may excite urethral discharge: and it is also induced in certain patients by irritations in the fibrous and muscular tissues, such as those caused by rheumatism and gout. Hippocrates stated that stranguary, and many other symptoms, frequently accompanied arthritic pains. Murry, Barthes, and others, described arthritic gonorrhœa. Deplaigne and Titley have observed that gout was suddenly succeeded by a discharge from the urethra, which alternated with the original disease. Bell has observed many patients successively attacked with urethral discharge, and pains in the larger articulations. Cullerier has attested the same fact. The former writer has stated, that the discharge is frequently seen in labourers who work in water. Martin has related the case of a man who suffered from rheumatism in the shoulder, whose pains suddenly ceased on the appearance of a mucous discharge from the urethra. Disease of the lymphatic system will also produce it. It is frequently observed in scrofulous persons from the age of infancy upwards, as attested by numerous obstetric writers. The discharge in such cases may be totally independent of violence offered to the genitals, and has been often erroneously considered contagious, a mistake which has frequently led to the conviction of innocent persons accused of having committed female violation. Such occurrences are graphically described

by Sir Astley Cooper in his Lectures on Surgery. When female children of seven or ten years of age are subjected to violence by libertines, the contusion or distension of the external genitals may cause purulent discharge, though the author of such injury be exempt from blennorrhagia. This fact should be recollected by medical practitioners when giving evidence in courts of justice. A case lately occurred in London, in which the medical men swore that a person accused of having violated a scrofulous child of ten years of age, had infected her with gonorrhœa, though the accused was found perfectly free from any urethral discharge. But it is a vulgar notion that sexual intercourse with a healthy individual relieves or diminishes that disease, and hence the frequency of attempts to violate children of a tender age, or girls about the age of puberty. In all accusations of this kind the male should be examined, and the presence or absence of urethral discharge established. It is also proved beyond the possibility of doubt that venereal excesses between two persons whose genital organs are healthy, may be followed in one or both by urethritis. Cullerier has met with several cases of this description; he relates one, in which the woman enjoyed perfect health, and she communicated blennorrhagia to all who had commerce with her. He also mentions the case of a young girl who was never affected with any genital disease, whom he found perfectly healthy, who very recently had communicated to a young man, gonorrhœa of the most inflammatory description; and he states that he could multiply many such cases. He remarks, that masturbation practised with violence, will produce this affection, he has seen it in children of both sexes; but most frequently in girls, as the irritation is directly made on the mucous membrane. Among the mechanical causes of urethritis, are contusions on the perinæum, equitation, stone in the bladder or urethra, strictures of this canal, the introduction of instruments, and in fact every thing which may mechanically irritate the urethra, or the parts with which it is connected directly or sympathetically. Urethritis arising from such causes, is seldom very acute, is of much more frequent occurrence than is generally imagined, and usually ceases when the exciting cause is removed.

The application of chemical irritants, such as the various substances used in injections, frequently causes urethritis and inflammation of the genito-urinary apparatus. Among this class of causes, we may include natural secretions, which, if accidentally become irritating, under circumstances which at all times it is not easy to appreciate, but among which the decomposition of certain products, in persons who neglect proper cleanliness, induce inflammations of the membranes that furnish them. It is in this way that we can explain the urethral discharge, which sometimes follows sexual

commerce with women during menstruation, the lochial discharge or leucorrhœa. The commonest cause of blenorrhagia or gonorrhœa is the application of a morbid secretion from venereal ulcers, or mucous membranes inflamed by this cause. A question has long been discussed, whether the matter of a chancre could produce gonorrhœa, and vice versa. A vast number of the most experienced authors have written upon this question; the majority of whom are of opinion, that these diseases are totally different. I have never seen a case of gonorrhœa produce syphilis or the reverse. I therefore fully agree with those who deny the identity of these diseases. M. Ricord's *Essays*, published in this journal, establish the fact. Finally, certain diseases of the skin may produce blenorrhagia, such as lepra, tinea, &c.

(To be continued).

Reviews.

Traité complet de l'Art des Accouchemens ou Tocologie Theorique et Pratique avec un abrégé des Maladies qui compliquent la Grossesse, le Travail et les Couches, et de Celles qui affectent les Enfans nouveau-nés avec Atlas. Par Alf. Velpeau Professeur de Clinique Chirurgicale, &c. *A complete Treatise on the Art of Midwifery, or Theoretical and Practical Zoology, with a compendium of those Diseases which complicate Pregnancy, Labour, and the Puerperal condition; and of those which affect new born Infants—with an Atlas.* By Alfred Velpeau, Professor of Clinical Surgery to the Faculty of Medicine at Paris, &c. Third Edition, revised and enlarged. Brussels and London. 1835. Royal 8vo. pp. 547. Sixteen Plates.

We give the title of this learned and standard work in full, for the purpose of enabling our readers to form a correct opinion of its extent, and in justification of our lengthened notice of it.

This work is one of the most stupendous productions of human industry. It contains the best history of gynæcology we have ever seen. The indefatigable author gives a complete catalogue of the works of the best ancient and modern writers on the subject. It is an accurate, well digested, well written history, evincing deliberation, research, judgment, and fidelity. The work is one of the most able, impartial, and comprehensive, which modern times have produced. Every page of it is written with a spirit of candour, impartiality, and philosophy. It is an undertaking of the best kind, and creditable alike to the learning, research, and great

experience of the author. It is a most valuable compilation to those who may not have the opportunity, nor the pecuniary means, to possess the pile of obstetric literature of different ages and nations.

The work before us has been rewritten and remodelled; indeed it is an original production, and not a new edition. M. Velpeau states, in his preface, that he has strenuously determined to avoid injustice to any person. He has spoken of all without hatred or restraint, but also without enthusiasm, and with perfect independence. "The sciences form a republic in which every man ought to be at liberty to search, examine, to have his opinions, and to say what he thinks. Truth is the avowed object of all who cultivate them, but as truth may be arrived at in various ways, I could never understand why a reasonable man could be offended because his ideas do not form the law for others." M. Velpeau has evinced this spirit throughout his work.

Our author claims the merit of having proposed the term *obstetricie* in 1823, that it has since been adopted by Dr. Blundell, and also in Italy. M. Velpeau is in error so far as the adoption of the term *obstetricy* in England, as the editor of this journal was the first to adopt it, previous to the publication of Dr. Blundell's work in 1834, and Dr. Castle, the editor of the work, acknowledged having adopted the term from Dr. Ryan, who used it in 1831. M. Velpeau proposed the term *tocology*, which was also adopted by Dr. R.; but he was not the first who employed the word *eutocia*—a term used by Merriman, Blake, and others. He is entitled to the introduction of the term *occytocic*, expressive of the means of hastening labour. He complains that some of his countrymen have accused him of neologism, an accusation urged very fiercely in this country, against those who venture to introduce terms more conformable to scientific phraseology, (see Preface to *Manual of Midwifery; or Compendium of Gynæcology*. Third Edition. 1831), and to the rules of grammar. He defines the science of midwifery (*accouchemens*), the whole of human knowledge relative to the reproduction of the species. We cannot help observing that the terms first proposed by us—*gynæcology* and *pædonosology*—are more correct and comprehensive

than midwifery, for all that relates to the reproduction of the species. We also regret that the author has not employed our term obstetrician, instead of accoucheur. We trust he will excuse these suggestions, and duly consider them before the appearance of his next edition.

He informs us that he has put under contribution not only the works of his countrymen, both ancient and modern, but also those of foreigners which he was able to procure. His experience is derived from the careful observation of 1,200 parturitions. He further enumerates the various additions he has made to the former editions of the work, which was originally intended as the heads of his lectures. He has appended copious notes at the foot of every page, and cited all authors whose opinions and facts (cases) were important, not to make a parade of vain erudition, but to appropriate to each his position in the vast field of science. He affirms that he has not written a single sentence he has not read, and he ventures to hope that those who know his taste for labour will not question his statement. He has prefixed a history of obstetrics, and illustrated the subject by beautifully executed plates. Such are the chief points touched on in the preface.

The next portion of the work is the introduction, which is divided into four articles. 1. Value of the science of obstetrics. 2. Who ought to practise obstetrics. 3. Historical notice of obstetrics. 4. Division of obstetrics by various authors, and various tables shewing the results of all reports on the subject.

The introduction occupies forty-two closely printed pages, royal octavo, and contains materials sufficient for a large volume, and such as were not collected without the labour of years. This part of the work is so interesting and instructive, that to do it justice we should give a literal translation of it. Our limits will not allow us, "our poverty but not our will consents." We can only notice it superficially.

1. *The value of the science of obstetrics.* In this article the justly celebrated author details and refutes all the miserable drivellers who have attempted to appreciate this branch of science. We strongly advise our Colleges of Physicians and Surgeons, "to

read, learn, and inwardly digest," our author's remarks, as also those knights-errant medical Quixotes, who have figured in the "Times" and in "circulars to the ladies." Let our anile corporations peruse this article, and they must be confounded at their own delinquencies in excluding obstetrics from the pale of medicine. Let them reflect, if they can reflect, on the fact that so late as the year 1750, according to one of themselves, 1 woman died out of every 42; in the British Lying in Hospital in London, in 1780, 1 in 60; in 1798, 1 in 288; and at present, not 1 in 1000, if attended by scientific obstetricians. The mortality of infants was proportionate. In 1758, 1 in 15 perished; in 1780, 1 in 44; in 1798, 1 in 77; at present, not 1 in 100.

The insanity of the colleges is restrained by the good sense of the public. The voice of the public has put the inhuman members of these societies in strait waistcoats. The race of intellect is too fast for them.

The public will have medical attendants at the dangerous hour of human birth, and nothing can prevent it.

But why, in the names of science and of reason, should the generative function in its normal and abnormal states, be excluded from the rest of the human economy?—we never could comprehend.

2. *Who ought to practise obstetrics?* In this article Professor Velpeau urges all the arguments in favour and against midwives and medical practitioners. In this article, the author gives clear evidence that he has consulted the works of Hippocrates, and his eminent successors to the middle ages, when barbarism had obscured, or nearly annihilated all the sciences. He has found in the works of the fathers of physic, that almost every one of the modern obstetric operations were described and recommended. He also cites those of Galen, Celsus, Aëtius, &c.; but has not referred to the work of our illustrious countryman Harvey, in which he would have found, that the discoverer of the circulation of the blood was the first physician after the revival of literature in the fifteenth century, who performed obstetric operations*.

* Exercitationes de Generatione Animalium. Quibus accudent de Partu, de Membris ac humoribus uteri, et de conceptione. 1603.

In his work will be found numerous obstetric cases which he attended, and for which he performed the necessary operations. His work, from which we quote, was published about sixty years before the time at which Jules Clement, a French physician, attended the mistress of Louis XI; and to whom is erroneously given the merit of having been the first male obstetrician. Dates are stubborn things; and those who make random assertions will do well to refer to them.

Our author gives a catalogue of all the eminent writers on obstetrics, to the present period, in strict chronological order. He criticises the respective works, and finds much fault with two of our most celebrated obstetricians. We agree with him in opinion that Burns' work is one of our best, and is better executed than others that have succeeded it. The charge made against many of our writers and lecturers, of not keeping pace with the progress of science in other countries, is perfectly just; for they often seem to be ignorant of the actual state of medicine beyond their own country. The last part of the introduction is devoted to the divisions of labours, and statistical records of the mortality of lying-in women in different public institutions. These records will be perused with great interest by every practical obstetrician. The author now commences his treatise, and divides it into six parts—1. The anatomical part. 2. The physiological. 3. Gestation. 4. The ovum. 5. On parturition. 6. On puerperality, or the puerperal state.

M. Velpeau occupies forty-eight pages in describing gynecotomy, or the anatomy of woman. His descriptions are minute and most accurate. He first describes the bones of the pelvis, articulations, straits, dimensions, differences relative to age, sex, and species, uses of the pelvis, vices of conformation, including all deformities, their causes, and the methods of detecting them; he then describes the sexual organs: such are the contents of the first book. This is the grammar of obstetrics, the book of nature which every obstetrician must study with the deepest attention. No one can practise obstetrics with safety to his patient, or credit to himself, who is not intimately acquainted with gynecotomy, which informs him of the measurements of the pelvis, by which he

learns the largest through which the infant has to pass. We have deemed it necessary to describe the dimensions of the infant's head, and the mechanism of natural labour, after those of the bones of the pelvis, with a view to teach the student the adaptation of the head to the pelvis, during the function of parturition. This is a digression, but one of importance to the obstetric student. It shows him the importance of committing to memory both the measurements of the pelvis and head, and their relations during parturition. This exposition must be given after the osteology of the pelvis, or in the article parturition.

After a careful perusal of M. Velpeau's first book, we pronounce it most ably executed, with the exception of one typographical error, which is calculated to mislead the student.

This occurs in page 87; in the description of the axes of the superior strait or aperture of the pelvis, the word inferior is printed instead of superior.

In speaking of deformities of the pelvis, M. Velpeau does not appear to us to have treated the subject so fully as it merits. He does not state that the pelvis is not necessarily deformed in cases of curvature of the spine, a fact about which we are often consulted by the parents of deformed young women who are about to be married. It should be known that, according to the latest British writers on deformities, when spinal curvature begins after the age of twelve, the pelvis seldom suffers unless there be rickets of other bones. In fact there may be the greatest spinal excuvation, the bones ankylosed almost at right angles, and the women bear children without any operation. We have a pelvis of such a woman in our collection, and many may be seen in our different museums. But it is also a fact, that pelvic and spinal deformity coexist, and that great caution and care are necessary in ascertaining the dimensions, and deciding the question whether it is safe or prudent for a deformed woman to marry. The first obstetric consultation to which we were called after receiving our academic testimonial, was a case in point; and since that period we have been consulted in a dozen such cases. In one of these, the pelvis was so deformed, that the Cæsarean operation only could effect a lady to get

married, that we could only dissuade her from it, by shewing her a pelvis deformed like her own, the impossibility of an infant passing through it if, even embryotomized, and that gastro-hysterotomy alone could enable our practitioner to extract it, or that she should lose her life. Such cases are however of rare occurrence.

Here we must pause at present, and shall continue our review of this splendid work, until we place its merits before our readers.

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ADDITIONAL OBSERVATIONS ON PHLEBOLITES. BY JOHN REID, M. D.

SINCE writing the few remarks on phlebolites which appeared in the last number of the *Edinburgh Medical and Surgical Journal*, I found, during the last summer, several of these bodies in the vesical and uterine veins, which presented some unusual appearances. The largest was at least of the size of a garden-pea; the others were considerably smaller. The largest and several of the smaller consisted of two distinct portions. The smaller portion occupied one of the extremities, was smooth externally, of a bluish colour, and was nearly of the consistence of cartilage; the larger portion was of a bony hardness throughout. When dried, this smaller portion shrank considerably, and resembled in appearance a piece of dried cartilage.

I find, upon more extensive inquiry, as I had previously expected, that many of those much engaged in dissection have observed these bodies more than once. I have found them in five out of the last sixty subjects in the dissection of which I have been concerned. My friend, Mr. Fergusson, informs me that he once found them in great quantity in the mesenteric veins.

Tiedemann gives the following analysis of them by Gmelin:

Animal matter	27.5
Phosphate of lime . .	53.5
Carbonate of lime . .	15.5
Magnesia and less . .	3.5
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	100.0*

It is stated by Dr. Lee that Dr. Prout has also analyzed them, and has obtained similar results.† Though the different changes through which these bodies pass in their formation have now been pretty accurately ascertained, yet the nature of the causes which produce these changes is exceedingly obscure. Tiedemann, Otto‡, Lobstein§,

* Tiedemann's *Zeitschrift für Physiologie*, Viarter Band Erstes Heft, 1831.

† *Cyclopædia of Practical Medicine*, article Veins.

‡ Otto's *Pathological Anatomy*, translated by South.

§ Lobstein's *Anatomie Pathologique*.

Cloquet, and Dr. Carsewell*, all agree that they are formed in the interior of the veins; that they at first consist of a coagulum of blood; in the interior of this clot the fibrin becomes pale and concrete, then assumes an osseous appearance, and this goes on little by little, and layer after layer towards the circumference. We could easily class their formation with the occasional deposition of calcareous matter among the other tissues, if Hodgson's opinion was correct, that they were first formed external to the veins, and afterwards made their way by absorption into the interior; or if, according to Andral†, they were in general first developed in the middle coat of the veins, and then passed into their interior in the same manner as the false cartilages are formed, and pass into the cavity of the joints. Hodgson stands alone in his opinion; and we even find Mr. Langstaff‡, upon whose authority he describes these bodies, inclined to believe that they are formed in the interior of the veins. The adhesions of these bodies to the inner coat of the veins by a fine membrane, as observed by Tiedemann and Cruveilhier§, would afford some countenance to Andral's opinion, were it not at variance with accurate observation; and we may suppose that this appearance was produced by the presence of the foreign body causing irritation and effusion of coagulable lymph.

Tiedemann||, and, following him, Lobstein, suppose them to be formed by a mechanical deposition of the calcareous matter contained in the blood, intermixing itself with the albumen of the blood. It appears to me that this opinion is unable to explain the manner of their formation in many cases, and consequently, can scarcely be regarded as the probable cause of their formation in those cases which seem to agree with this supposition. Mechanical deposition of the matters contained in the blood cannot, I think, explain their formation in those¶ cases, where we find an osseous-looking deposit taking place in the centre of a coagulum, around which the fibrin arranges itself in concentric laminae, increasing in density as we proceed to the centre, and where apparently those nearest the centre gradually assume this osseous appearance, which extends itself towards the circumference.

* *Cyclopædia of Practical Medicine*, article Veins.

† Andral's *Anatomie Pathologique*, vol. ii, p. 421.

‡ *London Medico-Chirurgical Transactions*, vol. viii.

§ Cruveilhier's *Anatomie Pathologique*, vol. ii, p. 71.

|| *Journal Complémentaire du Diction. des Sciences Médic.* vol. iii.

¶ Cloquet's *Pathologie Chirurgicale*, and Observations of Dr. Carsewell in article Veins, *Cyclopædia of Practical Medicine*.

If these bodies resulted from mechanical deposition, could the earthy salts pass through the several dense laminæ of fibrin, and deposit themselves, apparently in certain proportions, in the innermost laminæ? If the presence of the earthy salts was the result of a deposition, would they not rather be found upon the outer surface of the most external lamina, instead of penetrating through it to reach the innermost? We cannot, at least in the present state of our knowledge on the subject, refer their formation to any chemical agency. Their formation is probably akin to the occasional hardening of tubercles into bony concretions, which is a process independent of any vascular organization of the tubercles themselves. It is also illustrated by the formation of the vegetations on the valves of the heart, as observed by Laennec and Dr. Alison—also to the tubercular purulent, or encephaloid deposits, sometimes found in the fibrinous clots within the heart and great vessels.

I can scarcely venture to hazard an opinion on this subject; but I must confess I feel inclined to believe (however fanciful the opinion may appear to some physiologists) that the great resemblance of those bodies in their chemical analysis to the osseous texture, the manner of their formation, and their possessing in some cases physical properties similar to cartilage, can only be explained by supposing that they are the result of a process resembling the formation of the osseous tissue in the other parts of the body.

It is possible, that when our knowledge of the spontaneous motions observed in the circulating fluids of vegetables and animals becomes more extended, we may be furnished with a more satisfactory explanation of their origin.

Tiedemann and Lobstein are of opinion that these bodies are more frequently found in arthritic patients; and they believe that this may be accounted for, by supposing that the blood in those individuals may contain a greater quantity of earthy salts. The concretions, however, found in the joints of arthritic patients consist of urate of soda, a salt not discovered in the phlebolites. In all the subjects in which I found them, there was no reason to suspect any arthritic affection; but having had very few opportunities of dissecting subjects who have suffered from gout, I cannot speak of their relative frequency. They are generally described as being deposited in the dilated veins; but we so often see the dilations corresponding to the varied sizes of these bodies, that it appears probable that they are very frequently the consequence of their presence.

Since the preceding observations were written, I have found several phlebolites, in the spermatic or rather the ovarian veins of the two last subjects I have dissected. In one of these subjects, we found them in all the different stages of their formation.

The London Medical

AND

Surgical Journal.

Saturday, June 20th, 1835.

IMPORTANCE OF THE STUDY OF LEGAL MEDICINE.

MEDICINE, interesting though it be as the most extensive and varied of the sciences, and valuable as an art preserving and restoring the greatest temporal blessing which man enjoys, never assumes a finer position than when it appears as the ally of public justice, and the guide of the laws. The almost unerring certainty with which an enlightened physician may illustrate many cases whose intricacies could never be unravelled without his aid, the efficient protection he may afford to suspected innocence, and the searching light with which he may penetrate the secrecy of guilt, are considerations well calculated to make us proud of our profession. Yet it is not less extraordinary than true, that a great number of practitioners, otherwise well informed, are content to live and die in a state of profound ignorance of all that relates to legal medicine; and that we have no less cause for mortification at the awkward exhibitions made by some professors of our art, than for admiration of the results produced by the knowledge and acumen of others. The study of legal medicine has been till lately so entirely neglected, and is even now so insufficiently enforced, by the guardians of medical education in these kingdoms, that ignorance of the subject on the part of practitioners has been a matter rather of regret than of reprehension; the importance of this branch, however, is now beginning to be so generally recognised, and the facilities of cultivating it so much extended, that future deficiency will justly entail disgrace, and even involve a degree of criminality. Without wishing to make any disagreeable application of these remarks to indivi-

duals, we may allude to a case that occurred last week, where an unfortunate woman was committed for a murder of which she was entirely innocent, and several medical men found it necessary to retract "a hasty conclusion" at which they never could have arrived if they had kept in view the familiar fact that wounds inflicted after death do not bleed. Such mistakes may sometimes involve most serious consequences to the accused, and must always reflect unmerited discredit on medical science, whose dignity every practitioner should hold himself bound to sustain, as well by a due knowledge of its principles, as by a diligent application of its practical resources.

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Of all men living, doctors are the most liable to be praised where they have no merit, and censured where they are not to blame. Every candid man, on recurring to the history of his own practice, will admit that he has sometimes gained great glory for considerably retarding the recovery of a patient; on the other hand, a luckless son of Æsculapius often acquires a reputation little better than that of an assassin, among the relations and friends of a person who has died in spite of the best directed efforts of the healing art.

The laity are extremely apt to form a judgment from results, to which they are in the habit of applying a criterion which they misname *common sense*; thus if a patient were to be denied immediate admission to an hospital, on the ground that his case was not so urgent as that of many other applicants, and the said patient were to die a few minutes after, many would at once conclude that the physician who examined him was either intolerably ignorant or detestably inhuman; yet a case of this kind occurred the other day, at St. George's without any fault on the part of the physician then officiating. The patient laboured under an organic disease of the heart, which every medical practi-

tioner knows may at any time terminate fatally in a moment; at this very hospital the illustrious John Hunter, who was affected with a similar disease, dropped down dead from the effect of some slight circumstance which ruffled his temper; in the same way the poor man whose case was reported in last week's papers, may have fallen a victim to the excitement produced by his want of success in getting admission to the hospital. Although this case does not reflect, in the smallest degree, on the skill or humanity of the physician to St. George's, is it equally clear that it does not impugn the English hospital system? Even though art could have been of no avail in curing, and perhaps not much in alleviating such a disease, is there not something revolting to the feelings of humanity in the idea of a poor fellow being turned away from a *so called* public hospital, to die in the street? In Paris he would only have had to walk in, or if, as very seldom happens, one hospital were crowded, he would merely have had to go to the next. Whence arises this difference? Whence but from the fact that in Paris the hospitals are *national* institutions, commensurate in their plan with the wants of the population; while in London they are *private* institutions, on a comparatively diminutive scale, and altogether unworthy of a powerful and generous nation.

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"FIRST SURGEONS" AND FRENCH SURGEONS.

THE hireling Gazette having received orders, has treated its readers with a dish of abuse, addressed to M. Baumés, whose remarks on our English hospital-surgeons formed the Leader of our number of June 6th. The poor thing acknowledges that such is the only treat it can offer, for it "never expects to convince by argument." Nor are we wild enough to expect such a miracle: who ever heard of the Gazette bringing conviction by argument! It has been labouring so long to prove that rotten fruit is sound, that empty heads are crammed, and blockheads learned prodigies, that

it has got clean out of the way of persuading any one but the empty and blockheads who pay their annual subscription for a weekly puff.

In the impossibility of imagining any other motive, the Gazette ascribes M. Baumés' annoying parallel to an extraordinary feeling of "nationality;" but what does it advance to controvert his assertion, that our hospital surgeons are behind those of the Continent? For that assertion he has at least given detailed reasons, while our green friend proffers only a general contradiction. But, in fact, the parallel in question cannot be dictated by national feeling alone, for the writer makes it in more places than one, as between London and France, "*et ailleurs*."

But let us ask the Gazette, was it "nationality," or some filthier feeling, that urged "several of the first hospital surgeons in London" to make the attempt on its well-known pliability, and endeavour to stop the publication of Dupuytren's surgical lectures, by "expressing astonishment at their general inferiority to the doctrines and practice taught in the schools here?" How happened it that none but "first hospital surgeons" sent condemnatory letters to the Gazette? Or, is the opinion of those magnificos that of all English surgeons? We should be sorry to think so: we should be sorry to think that of the many who travel among the continental schools none did not return minus the mania for throwing scruple doses of calomel to the liver, antimonials to the skin, opium to the nerves, and, worst of all, the *operating* mania, imparted to them by the sforesaid "first hospital surgeons."

Alas! that we should be unable to include the accomplished Mr. Edwin Lee in this rational band—Mr. Edwin Lee, "who is now in Paris," who "has been in the habit of visiting the hospitals of the Continent during the last seven years,"—(what an ingenious and cheap advertisement!)—who has been "nettled by the manner in which English surgeons are spoken of," and who has written a most magnanimous epistle, in bad French, to the Gazette Medicale, and another, in worse English, to the Medical Gazette! But we dry our tears on this afflicting circumstance when we remember that others than Mr. Edwin Lee have been

in Paris, and deny the insinuation—for no broad assertion is ventured—that none but purely local treatment is practised in surgical cases on the Continent, and to maintain that the "*physiologie pathologique*" entails no necessity for any such exclusive treatment. On the whole, however, we ought to congratulate Mr. E. L. on this opportune championship, for we doubt not we shall one day also have to congratulate him—"thanks to the labours of Sir B. C. Brodie"—on his elevation to some third or fourth assistant-surgeonship of St. George's. Meantime we strongly recommend him and all other hospital aspirants to study the learned baronet's work on the joints and the physiology of flexion, particularly of the vertebral and knee-joints.

Let us not be misunderstood. We give all due credit to English surgery, but we deny utterly that our metropolitan hospital surgeons are the highest authorities, or the most capable of teaching it. We have before shewn how necessary time, patience, and condescension are to the performance of the duty of a clinical teacher, surgical or medical. None of these do our hospital gentry bestow on the patient or the student to the requisite degree. No wonder that so few of the rising students of the time of M. Roux's visit should have failed to answer the expectations of that distinguished surgeon; the mode in which they were instructed was vicious; the mode which they found it necessary to employ for obtaining place and practice was vile, and smothered all nobler ambition of science. Whenever, therefore, such opportunity as that afforded by M. Baumés' strictures presents itself for disabusing these individuals as to their vast importance and authority in surgical science, we shall seize it. For the rest, we could name a score of provincial surgeons, each more competent for the office than nine out of ten of those who now grace our metropolitan hospitals.

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"REMARKS ON DROPSY," AT THE COLLEGE OF PHYSICIANS.

To the Editor of the London Medical and Surgical Journal.

SIR—I have sought in vain for a novel idea or fact in the "*Remarks on Dropsy*," of which Dr. Macmichael lately delivered himself at the College of Physicians, an account

of which a contemporary of your's has published.

In *that* Journal such a congeries of common-places and school-boy twaddle is quite at home: it finds friends and equals in every page, and very probably it may find admiring readers among the subscribers who, I take it, are for the most part of that mental calibre that would induce them to read a paper on dropsy, or any other disease, provided it was the dropsy of some "Royal Highness" or "Noble Duke"—children that delight in reading of lucky fellows who "came to ride in a coach and six all very fine." Poor little dears! how they will gloat over this case of dropsy, not more remarkable for the rank and station of the subject of it than for some of the circumstances with which it was attended. Now, that dropsy should happen in a Duke of York I hold to be by no means remarkable, not more so than that insanity should seize kings: and of the latter instances abound. "Alexander lived, Alexander died," and of delirium tremens too: yet nobody, Dr. Macmichael perhaps excepted, dreams of saying that delirium tremens is more remarkable, because Alexander died of it. Dr. Mac., however, we presume, knew his audience when he related this remarkable case: besides, the President was there, and everybody knows his taste when Royalty is concerned, his "affectionate interest in the comfort and recovery" of Royal Highnesses, and his sense of "duty" when those personages are his patients.

But "the circumstances with which it was attended" were remarkable, we are told. Then is every case of dropsy remarkable; for with all Dr. Mac's amplifications, no symptoms peculiar to a royal dropsy can be discovered. To shew how apt the Doctor is at *augmenting* a hydropic case, I will quote the following old womanish twaddle: "But to return to the narrative: the disease continued to make progress, the dropsical swellings to increase, and there was evident fluctuation of water in the abdomen—in other words, a true ascites was now formed; and (here is a well-placed conjunction)! after mature deliberation, it was resolved to endeavour to relieve the difficulty of breathing, and to lessen the pressure from above the extremities." Wonderful result of mature deliberation! Oh! learned Hakims, "to resolve to endeavour to relieve" the breathing of a suffocating man, and "to lessen the pressure from above the extremities!" We might ask which extremities—upper or lower? if the former, God forbid that Dr. Mac. should relieve the pressure from above!

Five mortal columns of print are wasted on such trash as the above quotation. A parallel case is introduced: one of a *pauper* patient in the Doctor's hands; now mark how much more briefly yet more sensibly he dispatches *this* case; (he had been giving

the Duke broom (the *planta genista*) which he wittily observes "agreed so well with our patient, that it was impossible to avoid remarking that it seemed as if the ancient cognizance of the Plantagenets was destined to be the most auspicious remedy administered to a Prince of the House of York!")

"It happened that at this time I had a patient under my care in the Middlesex Hospital, labouring under ascites; and her abdomen became at length so distended, that, after the trial of various diuretic remedies without much benefit, the operation of tapping seemed to promise the only mode of relief, and in a few days it had been determined that it should be performed. To leave, however, no means unemployed, I ordered the digitalis combined with broom, and in a very short time the remedies acted in so decided a manner that the whole of the fluid was carried off, and the operation of paracentesis rendered unnecessary by the powerful action of the kidneys themselves. This circumstance, occurring at this very moment, increased my confidence."

Here is no mature deliberation, nothing remarkable in the circumstances; how then could the doctor suppose that the poor patient's remedies would apply to the "remarkable" case of his Royal Highness? Doctor, doctor, you have not your lesson so completely as the President: why introduce hospital patients into the history of Royal invalids? why venture to hint at the possibility of the same remedy curing the same disease in both? I dare to say the President was chuckling consumedly when you so roughly laid the Middlesex hospital man alongside the Duke and compared their cases. Such, my friend, are not the tactics of the College of Physicians. Say as much nonsense as can be said; rake up the Royal dead as often as you please for your own purposes (people had forgotten that you attended the Duke), butter the Royal living as much as your powers can effect, and the sounds will be sweet and congenial to all who visit the library of the College; but, as your well wisher, I beseech you never again attempt to give a sensible account of a pauper's case.

Trusting, Mr Editor, that you will allow these short observations and this excellent advice to the Doctor, a place in your Journal.

I remain, Sir,
Your obedient Servant.

JULIUS.

Hospital Reports.

NORTH LONDON HOSPITAL.

Lithotomy—Difficulties of the Case.

JOHN EDWARDS, aged 61, was admitted a few days since under the care of Mr. Liston. He had a short time ago submitted to be examined with a view to the operation of

lithotripsy. The explorer, however, caused so much pain and irritation in the bladder, that he rather consented to be cut than undergo any attempt to break the stone.

On Saturday last, Mr. Liston proceeded to operate; the patient was secured, and the presence of the stone detected in the usual manner. The curved staff was introduced, and an incision of about $3\frac{1}{2}$ inches in length made; when the operator introduced his finger, he had much difficulty in feeling the stone; the forceps was now introduced, but it could not be expanded; the wound was enlarged in the original direction with a blunt-pointed bistoury, and a stone removed with the forceps; a small portion of the prostate came away at the same time, which appeared to be an excrescence; the bladder was examined by the operator, and another stone detected, which was removed with a very long scoop and the finger; the operation lasted ten minutes and twenty-five seconds. Mr. Liston now explained the difficulties of the case: he said that the perinaeum was of an unusual depth, the prostate very large and rigid, and the bladder of very great capacity; another cause for his not being able to reach the stone with his finger was, the continual efforts of the patient to extend his limbs, and draw up his pelvis. It was on the whole a most instructive case, though of a very different kind from that which they lately witnessed in that hospital; it would not be fair to judge of a surgeon's capacities by the quickness with which he operates; the difficulties of a case must always be taken into consideration, and the manner in which those difficulties are overcome; this case was, then, instructive, as shewing the necessity of presence of mind under every occurrence. He did not think the patient run greater risk by the removal of the small portion of the prostate, but thought it probable that that might have caused the retention of urine, with which he had suffered for some time. The lithotrite could not have been used in this case from the very irritable state of the bladder; he was no enemy to lithotripsy, but wished to limit it to those cases for which it is suited, and, therefore, its sincere friend. He had only met with two cases before in which he could not feel the stone with his finger, and ascertain every thing connected with it; he once more cautioned them against losing their coolness and collectedness under any emergency.

The theatre was much crowded. The operator displayed the coolness and self-command for which Mr. Liston is celebrated, to very great advantage.

The first stone was about $1\frac{1}{2}$ inches in length, $\frac{1}{2}$ inch in breadth, and $\frac{1}{4}$ in thickness; the second was somewhat smaller; it had got into the folds of the bladder, which added much to the difficulty of its extraction.

18th. In a most favourable state, and likely to do well.

Foreign Medicine.

Treatment of Mercurial Salivation by concentrated Muriatic Acid.—In a clinical lecture lately delivered, M. Velpeau remarks: "I then thought to inquire what tissue or organ is the actual seat of mercurial salivation; whether it was connected with an inflammation of the salivary glands or with some alteration of the mucous cryptæ in the mouth. All the ancient and modern authors that have treated on this subject stay by the former explanation. For me, I agree with M. Berard in considering the latter the better one, for when a gland is inflamed it no longer secretes: besides which, the patients do not refer the pain they feel to the glands, but to the interior of the mouth.

What is the progress and effects of mercury? By its extreme subtlety it is introduced into the system, saturates it as it were and inflames it; for most generally the gums, the internal lining of the cheeks, the edges of the tongue are covered with a thick layer of lymph, and this is most probably owing to an irritation, generated either by sympathy or continuity, and it is therefore essential to look to the cryptæ rather than the glands. This view of the subject induced M. Berard to make use of muriatic acid, and myself to employ it alternately with a mixture of honey, the acid in question, solution of lunar caustic, and several other remedies. For the last two years I have returned to the use of the acid, but I now prescribe it in the pure or even concentrated state. In a patient who had been labouring under severe ptyalism for four days, and to whom I applied the acid by means of a hair brush pencil, the good effects were immediate. I was afraid, however, lest it should produce mischief, but was deceived: a pellicle forms over the mouth, but there is no inflammation. Of three patients treated with concentrated muriatic acid, one has left the hospital: of the two remaining the second recovered in a few days. In these cases the patients were touched with the remedy four times in two days, and this sufficed. In the third patient the inflammation was less acute, and the effects less marked: moreover, the salivation was of some standing; from all which it may be inferred that the muriatic acid is beneficial in proportion to the intensity of the inflammation. To this patient, therefore I applied alum, and the symptoms were almost directly ameliorated; alum, however, to be useful should be used in substance and in large quantities."—*Gazette des Hôpitaux*, June 2nd.

Influence of a Diet of Pork on the Organs.

The fibrous and fatty parts of pork resist the action of the digestive organs for a longer time than most other alimentary substances, and the organs therefore strive with greater energy to overcome the resistance; by this the healthy condition of them by repetition of the process becomes changed into a pathological state, which consists either in inflammation, hypertrophy or various organic changes. So much for the local changes; the general ones are referrible to two sources; first, the inflammatory irritation of a portion of the digestive canal may be reflected on the other organs, and keep them in a continual state of excitation, or a kind of general chronic phlegmasia, leading to emaciation and actual phthisis; secondly, when sausages or other dishes containing pork have been digested by a powerful effort, all the principles of the food have not been equally acted on; the ozmazome, for instance, and in particular, escapes and passes into the circulating mass, impressing on the lining tissues in so exciting a manner as eventually to cause the same results as those above mentioned. Preparations of pork have not, therefore, been inaptly ranked among the heating and deleterious alimentary substances. In saying this, they are only to be understood as acting in a slow manner, unaccompanied with pain, and not involving the necessity for laying up, in short, only with a dietetic influence.—*From a work intitled "Recherches sur les Accidens produits par l'usage des Preparations de Charcuterie avaries."* By M. Pointe.

Diagnosis drawn from the Saliva.

At the conclusion of an elaborate article inserted in the May Number of the Archives Generales, by M. Donné, and intitled, "Recherches into the Chemical Characters of the Saliva considered as a diagnostic means in some affections of the Stomach," the author, after presenting certain cases in confirmation of his views, states:—

"In the four cases I have cited, I have shewn the coincidence of that lesion of the stomach generally attributed to what is called inflammation, with acidity of the saliva. In order to complete this series, it would perhaps be requisite to produce cases in which the saliva, having been found alkaline throughout the whole course of such diseases as pneumonia, pleurisy, encephalitis, &c., the stomach has exhibited no analogous alteration; and, were it not that I fear to become tedious, I could readily choose from among such cases. In fact, I have seen the saliva of an alkaline nature in a great many diseases, and in several instances I have verified the state of the stomach by anatomical investigation. At the present moment I have two cases, one of encephalitis, the other of pneumonia, in which

the saliva had undergone no alteration during life, and in which also the stomach presented no appreciable change, either in its colour, in the development of its vessels, nor the appearance and consistence of its membranes. I have made no allusion to the chemical characteristics of the fluids found in the stomach itself; their nature depends much on that of the beverage the patients may have employed, and occasionally on the presence of bile; the gastric juice is, as is well known, and has been confirmed by very many experiments, strongly acid."

We add to the above conclusions the heads of the post mortem examinations, from which they are drawn: this will suffice to shew the coincidence alluded to by M. Donné.

Case 1.—Intense bronchitis: symptoms of severe fever: *acidity of the saliva*. Treatment by bleeding and emollients. Death. Numerous ulcerations, with vivid redness in the lower portion of the small intestines: stomach distended with gas: *mucous membrane spotted, softened, raised in a pulp in the great cul de sac: black injection of the vessels in other points.*

Case 2.—Ataxic continued fever; *acid saliva*: injection of the cerebral substance: serum effused into the ventricles: *injection and softening of the gastric mucous membrane throughout a certain extent.*

Case 3.—Continued fever: delirium: stupor: *acid saliva*. Treatment, bleedings and emollients. Death. Injection and ulceration of Peyer's glands: *injection and ulceration of the gastric mucous membrane.*

Case 4.—Pain of the side, shivering, cough, pleurisy of the left, and pneumonia of the right side: sudden nausea, vomiting, diarrhoea: *extreme acidity of the saliva*: vigorous antiphlogistic treatment: repeated general and local bleedings. Death. Purulent effusion into the left pleura: circumscribed hepatization of the superior lobe of the right lung. *Vivid injection of the stomach: softening: almost complete disorganization of the mucous membrane.* No ulceration or marked redness of the intestines.

[This is certainly a subject for further and interesting inquiry: for if the secretions of the tongue are so much relied on as an index of the condition of the stomach, why should not the secretions of the whole mucous membrane communicating with that of the stomach—of the fauces, salivary ducts, and cryptæ—be also accurately examined, and diagnostic conclusions drawn therefrom? The same remark applies to the secretions of the skin: we seldom hear of their being attended to, except as regards their quantity, and it may be the accompaniment of a cold or hot surface, constituting cold or warm sweat.]

**FREQUENCY OF INFANTICIDE SINCE
THE INTRODUCTION OF THE POOR
LAW BILL.**

*To the Editor of the London Medical and
Surgical Journal.*

SIR—It is quite lamentable to peruse the daily papers, and see no less than the history of twenty cases of infanticide in the neighbourhood of St. Pancras and Islington in the course of a few days, the result of a law which was called "a boon to the female part of the population." I very much doubt the justice of this law, which compels the softer sex to support their illegitimate offspring, while it frees fathers from all liability to support their children. It enables the idle, affluent, and licentious of our sex to seduce and destroy female honour and innocence with impunity, while it debases woman to the rank of the savage, by compelling her, when unable to support the innocent cause of her shame, to sacrifice its existence. Thirty years' observation on men and manners in this metropolis, has led me to the conclusion, that men are much more vicious and depraved than women; and that they ought to be punished for destroying the peace of families and female virtue. Physiology informs us that one sex is as much influenced by amorous impulse as the other; but the difference of education, of habits, of men, lead them into more licentiousness. Had our legislators duly considered the interests of morals and of society, they could never have passed a law which is a powerful incentive to female seduction, and to the inhuman crime of child-murder. I am ready to admit that the law required to be changed and improved; but it was running into a great extreme to free our sex from all the responsibility. It is deplorable to think that women may be seduced, scouted by society, driven to desperation, and to the frightful crimes of infanticide or suicide. This law will have much influence on the bills of mortality, on public morals and questions of legal medicine. I am one of those who agree with Mr. Chitty in the opinion expressed in his Medical Jurisprudence, that our laws are most deficient in punishing those who throw disgrace on families, and that the crime of seduction ought to be much more severely punished than it is by a paltry mulct. A man who destroys female innocence ought not to be sheltered under a vicious Act of Parliament, or rendered irresponsible for the support of his offspring. Were the law more just, fewer infanticides would occur.

I am, Sir,
Your obedient servant,
ZACCHIAS.

**REFUSAL OF ADMISSION INTO SAINT
GEORGE'S HOSPITAL—SUDDEN DEATH
OF THE PATIENT—DEFENCE OF THE
PHYSICIAN.**

*To the Editor of the London Medical and
Surgical Journal.*

SIR—As a Subscriber to your valuable and independent Journal, from the first number to the present, and having long admired your liberal sentiments, I am convinced you will give me a corner in your pages, while I allude to a case of importance—namely the sudden death of a patient last week, who was refused admittance into St. George's Hospital. You have often quoted the motto, "*Fiat justitia, &c.*" and I mistake you much, if you will not act up to it. I know you have had great reason to complain of the conduct of Dr. M'Leod on many occasions, but especially for his heartless and cold-blooded attacks upon you, a brother physician, and rival editor, the day after the iniquitous verdict against you. If I may venture to form an opinion of your mind, I should think it is constituted on the principle, "to forget is human, to forgive divine;" and, though you owe him little consideration as a rival and an opponent, I entertain no doubt but you will insert this my defence of him, as regards the case to which I have alluded. It appears that when Dr. M'Leod was on duty at St. George's Hospital, a man applied to him for admission into that Institution. According to the rules of that establishment, the board, twenty-five in number, and most of them of the medical profession, decide upon the cases for admission. In the case referred to, they concluded the man had disease of the chest, rather an indefinite sort of decision; and they refused him admission, making him an out-patient. The poor man leaves the hospital, staggers in the street, and is obliged to sit down within fifty yards of the Institution. He is noticed by a good Samaritan who is passing by, a mechanic, who addresses him,—and inquires what is the matter with him—a dialogue takes place by no means creditable to the hospital, the dying man exclaims with a breaking heart, "there is no use in returning there, for they have made me an out patient;" a gentleman sees him and humanely pays for a coach to convey him to the hospital, and when it arrives there, he is dead! Now sir, is it not as clear as the noon-day sun that no blame attaches to Dr. M'Leod; and that if there be any, it belongs to the intelligent Medical Board that refused this poor man admission? No doubt, the *Lancet* will have a furious attack on the Doctor, on the Board and Hospital system, and there is just ground for some animadversions on the Board.

There are, however, exculpatory circumstances in favour of it. The members of it might not have examined the heart or chest

stethoscopically, the symptoms might not have been urgent, but the refusal of admitting the unfortunate man, might have such depressing effects, as to destroy him before he walked a yard from the hospital. Permit me to observe that the illustrious John Hunter dropt dead suddenly of a similar disease, when apparently in his usual state of health, in the very same hospital, and every practitioner knows that sudden death occurs in similar diseases.

I am Sir,
AN OLD SUBSCRIBER.

[We fully agree with our correspondent, that there is no blame whatever attached to Dr. M'Leod, though the ignorant may think otherwise.—Ed.]

—o—

MEDICAL EVIDENCE—THE MEDICAL JURISTS OF CLERKENWELL—VERDICT MURDER AND NO MURDER.

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To the Editor of the London Medical and Surgical Journal.

SIR,—No doubt you must have observed, in the newspapers of last week, the account of the inquiry at the Hatton Garden Police Office, relative to the death of a girl, nine years of age, who was supposed to have been murdered by her mother. It appeared that the surgeons swore, in the first instance, that the girl was destroyed by the mother having introduced a bodkin or knitting case, ten or eleven inches in length, into the rectum; and that this passed to the gall-bladder, which it wounded. This foreign body was discovered by accident, and the surgeons had previously agreed that the child died of croup or inflammation of the lungs. The magistrates committed the accused for murder, a coroner's inquest is held next day, and the same surgeons contradict their former evidence, and maintain that death was caused by inflammation of the lungs, and not by the foreign body; that is to say, that the child died a natural death. They said that they had arrived at a hasty conclusion the day before; for had the bodkin been introduced during life, it would have caused hæmorrhage, a species of knowledge which they did not possess on the preceding day, when before the magistrates. It is a melancholy reflexion, that personal liberty and fair fame are at the mercy of such incompetent medical witnesses as the above; for had any one of them ever perused a work on medical jurisprudence, he would have known the difference between wounds inflicted before and after death.

I am, Sir, yours obediently,
A MEDICAL STUDENT.

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Fissures on the Cranial Bones of Infants, after a Natural Delivery.

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PROFESSOR SIEBOLD, of Marburg, gives the following case in corroboration of the assertions of Haller, Baudelocque, &c. &c. that fissures and other supposed marks of violence may exist in the bones of the cranium of still-born children, from the effects of the expulsive action of the uterus.

A female aged thirty, was received into the Lying-in Hospital, pregnant for the third time. The first child had been extracted by the forceps, but dead. The second, also dead, had been expelled by the efforts of the uterus, after the administration of ergot. On her entrance, this woman was in the following state: the uterus could be felt three inches above the umbilicus, the neck very high and almost effaced; Baudelocque's compasses gave a diameter of three inches and a half; the sacro-vertebral symphysis could not be felt with the finger. Labour commenced in the morning, the waters came away about 5 o'clock, and the os tincæ immediately contracted, as is almost always the case when the neck is merely dilated by the membranes, and these are not instantly replaced by the head of the child. After a labour of nine hours and a half the child was expelled. It weighed seven pounds, and gave no signs of life. An examination of it was made the next day. The longitudinal diameter of the head was four inches and a half; the transverse, three and a half; the diagonal, five; an enormous bloody tumour was situated on the right parietal bone, and the left temple was denuded of its epidermis. The parietal bone of the same side presented three fissures, one an inch and a half in length, and two others of a smaller size. The os frontis also presented a fissure towards its lower part. Moreover, the right parietal was depressed, and much blood escaped by the fontanelles.

It cannot be doubted, that the sole cause of these fissures was an undue pressure of the head against the sacro-vertebral symphysis, and affords additional proof of the means which are employed by nature to facilitate the expulsion of a foetus. If the forceps had been employed, these fractures would indubitably have been attributed to an undue pressure exercised with them; and it must be admitted that in a case where other circumstances demand a judicial investigation, that it would be difficult to decide whether such fissures were the effects of the efforts of nature, or were caused by external violence; an attentive examination of the lesions, and of the pelvis of the woman, could alone throw light on the subject.—*Revue Médicale.*

—o—

IMPROVED MINIM MEASURE.

To the Editor of the London Medical and Surgical Journal.

Sloane-square, Chelsea,
6th month, 1838.

RESPECTED FRIEND,—I was gratified to observe that my improved minim measure, as exhibited at the meeting of the Medico Botanical Society, has obtained a favourable notice in the pages of Dr. Ryan's Journal; and I feel assured that he will allow me the opportunity of replying to a few words, which appear in it by way of note, and imply an *overstatement* on my part.

The inequality in the size of drops in different fluids, as influenced by circumstances, is the subject alluded to; and the results there stated, are, I confess, a little startling; but having repeated some of the experiments, I must maintain their correctness; not as the probable mean, but (as it may be observed, is stated in my paper) as the "EXTREMES" of variation to which the mode of admeasurement by dropping is liable.

This little instrument, represented in the woodcut, is coming into extensive use; but is not intended to supersede the No. 60 measure, but rather as an effectual substitute for the old five minim tube, now gone out of use, in which the required quantity is retained by applying the finger to the upper orifice.

My improvement consists in the introduction of a piston of such length as not to touch the fluid measured; and also in the contraction of the lower orifice to a very small bore, by which the inaccuracy arising from the concavity or convexity of the lower surface of the fluid taken up is obviated.

The instrument has also the merit of uniting cheapness to convenience and accuracy.

I am, very respectfully, thine,
ROBERT ALSOP.

CHINESE DOCTORS.

CHINESE doctors are, usually, unsuccessful literati, or persons fond of study. They claim the title of Doctor as soon as they have read a number of books on the subject of medicine, without shewing by practice that they are entitled to the appellation.



Their minute examination of the pulse, which is frequently very correct, gives them some claim to the title of able practitioners. Anatomy, a correct knowledge of which must be gained from dissection, the Chinese regard as founded on metaphysical speculations, and not in truth. Their materia medica is confined chiefly to herbs, which are the principal ingredients of their prescriptions. They have some very excellent plants, but injure and weaken their effects, by mixing them up, as they do, often sixty and seventy in one dose. They generally foretell the precise time of the patient's restoration, but are often found mistaken. To stand against men of this description, who are so very wise in their own imagination, was not an easy task; but I always convinced them, by facts, that our theories, when reduced to practice, would have the most salutary effect.—*Gutslaff's Voyages to China.*

—o—

Case of sudden and unexpected death, in which the Heart had only a single Coronary artery, the coats of which were studded with patches of cartilaginous and ossile deposition. By Dr. W. Thomson.

Mr. D. aged 49, was found dead in bed with his eyes closed, his arms by his sides, and everything betokening his having died whilst asleep. Some years ago he suffered much from rheumatism, but had recovered, and was in the enjoyment of good health, fat and fleshy. He had had flying rheumatism in different parts of his body, at last settling in a leg and arm for ten days or a fortnight before his death, but complained of no other ailment. It was mentioned by one of his friends that he disliked walking fast.

Heart of natural bulk; depositions of bony matter at the roots of two of the aortic valves; a single coronary artery with bony and cartilaginous depositions, particularly hard at its mouth, and extending in small patches down its ramifications.

—o—

CORRESPONDENTS.

A Matter-of-Fact Man.—Our Correspondent is evidently connected with some school in which prizes are awarded. As an anonymous writer, he has no right to call on us for an explanation of the paragraph to which he alludes. If a lecturer, which we strongly suspect he is, we call on him to stand forth in *propria persona*, and if he obtain the consent of his colleagues, that he is to be their champion, we shall be ready to publish the correspondence about the school to which he belongs. We decline publishing correspondence of this kind, for reasons we need not mention; but if the whole of the lecturers in any school sign a letter addressed to us, requesting us to do so, we shall comply with their request. We cannot, however, do it at the individual request of any of them who chooses to address us anonymously.

THE

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VOL. VII.

LECTURES
ON THE
INSTITUTIONS OF MEDICINE,

DELIVERED BY JOHN FLETCHER, M.D., F.R.C.S.E., AT THE ARGYLE SQUARE SCHOOL OF
MEDICINE, EDINBURGH; SESSION 1834-35.

LECTURE XXII.

Organic Sympathy—Animal Sympathy—The Passions.

THE examples of the operation in this way of sympathy, properly so called, or ORGANIC SYMPATHY, as well in health as in disease, are innumerable. It is by sympathy that the primary irritation of the bronchial tubes, for example, by the momentary accumulation in them of carbonic acid and halitus, and that of the lungs generally, by the momentary accumulation of venous blood in the pulmonary arteries, become a stimulus respectively to the irritability of the *expiratory and inspiratory muscles*, so that the immediate stimulus to respiration, or what may be called the fundamental position of the organized body, is, in fact, sympathy; and if we can prove by what means the direct or primary irritation is, in this case, conveyed to distant organs, it will furnish a strong collateral argument in favour of regarding this means as, in all cases, the vehicle of sympathy and passion or instinct—but to this part of the subject we shall recur presently. Cold water, again, or cold air, applied to the face has, by sympathy, a similar effect in exciting the inspiratory muscles; and it is, in all probability, upon this new stimulus that the first inspiration of the new-born infant principally depends. So, also, with respect to the *Circulating Organs*, there is no part of the body with which the heart does not more or less intimately sympathize, the slightest affection, whatever be its nature, of any organ producing a corresponding, and to a greater or less degree specific action on the irritability of this organ, and, consequently, on the pulse; and indeed it is upon this fact, little as it is by most people adverted to, that is founded all our reliance on the state of the pulse, as indicative of the state of the system in general. Nor is the influence of sympathy upon the irritability of the capillary arteries, as *organs of secretion*, less remarkable, an irritation of the female genital organs, for example, by copulation, utero-gestation or parturition, of the nostrils by mustard or onions, or of the mouth by tobacco, operating as powerfully in producing respectively a flow of milk, of tears, or of saliva, as if the stimulus had been applied to the secreting organs themselves. An equally good illustration of the action of sympathy is afforded by the *digestive organs*, any considerable mechanical irritation of the fauces, as is well known, acting in such a manner, as well on the irritability of the muscular coat of the stomach, as upon that of the other muscles which co-operate with this organ in vomiting, as to produce this effect; and indeed the stomach, like the heart, has a more or less intimate sympathy with every organ of the body, and participating more or less in the affections of each. With respect likewise to the effects of sympathy on the irritability of the *organs of sensation*, the irritation excited by light in one part of the eye, constantly becomes by this means so strong a stimulus to another, as to occasion its expansion, and thus to give rise to a contracted pupil; and the irritation of certain parts of the ear, produced by harsh and discordant sounds, not unfrequently acts by sympathy so forcibly on the capillary arteries of the gums, as, by dilating them, to give rise to the sensation called setting the teeth on edge, and sometimes even to hæmorrhage. Lastly, as examples of the action of sympathy on the irritability of the reputedly *voluntary muscles*, may be mentioned the effect of such an irritation of the diaphragm as produces its convulsive descent upon the muscles which depress the lower jaw, in which the jaw descends jot for jot with the diaphragm, so as to occasion yawning, that of certain irritations again of the stomach upon the diaphragm,

so as to occasion hiccough; and that of the salutary irritation of the same organ by the aliment, upon all the voluntary muscles of the body, so as to occasion that greater degree of healthy contraction of those organs on which the sensation of increased energy and alacrity, so generally found to succeed a meal, mainly depends. The effects of the irritation of the nostrils by tobacco in exciting, by sympathy, the contractions of the abdominal muscles, as in sneezing, have been already alluded to. That of the eye by a strong light has sometimes the same effect; and it is in a similar way that any irritation of the membrane of the larynx, or even sometimes of that lining the external auditory canal, excites the muscles of the glottis and abdomen, so as to produce coughing. It is by sympathy also that the irritation of the rectum by the stools, and of the urinary bladder by the urine, act on the voluntary muscles which co-operate in expelling them; and finally, that an irritation of the arm-pits or soles of the feet, as in tickling, becomes frequently so strong a stimulus to various voluntary muscles at a distance, as to give rise, sometimes to uncontrollable laughter, and at others to almost universal convulsions. These are a few of the most striking isolated instances of the operation of sympathy, as a stimulus to irritability, in the state of health, with which alone we have anything to do at present, or still more remarkable examples might be adduced, derived as well from the action of the ordinary exciting causes of disease, which, when applied, as most of them are, to any other organ than that which is to become the seat of the disease, perhaps generally, if not always, take effect by sympathy, as from the translation of diseases from their primary seat to distant organs, and lastly from the operation of remedial agents, which, when administered, as is generally the case, by any other avenue than that on which they are intended to operate, in all probability act only or chiefly by means of sympathy—but upon this wide field we must not enter in this place. But sympathy is perhaps a much more general and important agent in promoting the ordinary vital actions, at least of the higher tribes of organized beings, than these isolated instances of it, from irritations more or less inordinate, would induce us to imagine—not less so perhaps than caloric, or any other to which such beings are constantly to a greater or less degree exposed—and this quite independently of the mutual subserviency of the results of the several functions to the continuance of the rest, to which allusion has been made elsewhere. If it be true that the vital action of every organ of the body consists in its irritation—in other words, that life and irritation are nearly, if not quite synonymous terms—and if the inordinate irritations of individual parts have so obvious a tendency to be extended to others, is it not reasonable to believe that their ordinary irritations, or natural functions, exert likewise a considerable influence over those of more or fewer distant parts, according to the specific irritabilities of the latter, and that accordingly the natural irritation of every organ is in some degree essential to that of all the rest? A beautiful illustration of the influence of one function over others is afforded by the higher classes of animals, at puberty, when one new irritation being set up in the body, female or male—that of the ovaries in the former, and that of the testicles in the latter—the actions of distant organs are so modified by this new irritation, which is of a very different character in the two, that there is scarcely a square inch in the body which does not undergo some change, and almost every organ becomes, after a time, as characteristic of the different sexes as the proper genital organs, which had previously constituted almost the only distinction (*a*). Nor is it only in establishing these differences that the new irritation operates, but it is essential also to perpetuate them; the subsequent abstraction of either the ovaries or the testicles, or even the cessation of the proper function of each, as in old age, going a great way, as is well known, towards obliterating the characteristic peculiarities which the setting up of this function had established (*b*); and if the natural irritation of this one organ has so extensive an influence on that

(*a*) "Propter uterum," said the ancients, "Mulier est quod est." They should have said rather, "propter ovaria;" but the saying, as it stood, sufficiently indicates their observation of the influence of the actions of one organ over those of all the rest.

(*b*) This effect of advanced age is often very remarkable in birds, the hen frequently, on ceasing to propagate, assuming somewhat of the voice and plumage of the cock; corresponding effects manifest themselves in some quadrupeds; and we may notice something similar in our own species, on the approach of senescence, the silver tones of a woman becoming in general more gruff, as the rough voice of a man becomes more "piping and whistling in the sound," and

her soft chin becoming grisly, as his stiff beard becomes soft and relaxed. The naturally capricious and timid mind of woman also acquires, generally, about the same period, more firmness and courage, while the naturally steady and enterprising spirit of man degenerates in both these respects; and, while her feeble constitution becomes commonly more robust, his strong frame becomes in the same degree more infirm. Whether or not Peter Pindar was right, when, in allusion to the investigation of this subject—at that time a new one—by Sir Joseph Banks, and in support of the doctrine in question, he asserted that it was

"——— denied by no man

That Age had made Sir Joseph an old woman,"

of others, can we doubt that those of all the rest have a similar influence, although it is less observable from the latter not being more marked at one period of life than another? We indeed tacitly acknowledge that the healthy irritation of each part is more or less essential to that of others, when we ascribe, on the one hand, the failure of appetite and digestion to the generally diminished action of the system, produced by sedentary habits and other similar causes, and, on the other, the general languor and listlessness which so commonly succeed a debauch, to the stomach being out of order; and what we so unhesitatingly admit with respect to the function of the stomach, both as acted upon by those of distant parts, and as acting upon these, may be perhaps admitted with as little hesitation, *mutatis mutandis*, with respect to that of every other organ of the body. And how extensive is the application of this principle must be sufficiently obvious. For if it be only during the natural irritation of each organ that all the rest receive their proper stimulus, all being less or more excited than natural, when the irritation of any one is below or above par, it will follow that during inflammation or increased secretion in any one part, as occurs, for example, in dropsy, both which states imply, as will be explained in future, diminished irritation—the consequence, it is true, of a previously increased irritation—of the capillary vessels of the part affected, a less stimulus than ordinary must be communicated to all the other parts of the body, including the other secreting vessels, which, not undergoing therefore the necessary primary irritation, of course secrete less than usual, and hence the generally *diminished secretion* attendant on these states; whereas on the sudden cessation of an inflammation, or the suppression of an ordinary secretion, both which circumstances imply reserved or increased irritation of the capillary vessels of the part in question, a greater than the usual stimulus must now be extended to all the other parts, and of course to the other secreting vessels, which, undergoing now more than the ordinary irritation, will have their secretions, on the subsequent collapse or diminished irritation of these vessels, increased—each set of them according to its specific susceptibility of the new stimulus—and hence arise what are called *critical and vicarious discharges*, or, when the collapse succeeding the sympathetic irritation does not so rapidly terminate by secretion, *metastases*. It is sufficient at present to hint at this, as one of the numerous applications of the principle now under consideration, the full investigation of the subject belonging, of course, to another place. It is however only in the higher tribes of organized beings that this extensive influence of sympathy displays itself, since it is only in proportion to the concentration of the several organs, and the adaptation of each to a distinct function, that it is called for; and it is remarkable that it is exactly in the same proportion that the system of nerves, which seems to be instrumental to the conveyance of this stimulus, becomes developed—but to this subject more particular allusion will be made after a few examples of the operation of Passion or Instinct, or *Animal Sympathy*, as a stimulus to irritability, shall have been adduced.

Assuming then, for the present, what will be demonstrated, as far as possible, in future, that passion or instinct consists in an irritation of the brain, as the seat of every mode of thought, the examples of the translation of this irritation to distant organs, so as to act on their irritability, are perhaps even more remarkable than those of sympathy properly so called: we shall begin with the effects of passion in general, and subsequently enumerate a few of those resulting from that department of passion called instinct. Thus, the shortness of breath produced by almost every emotion is a sufficiently familiar illustration of the operation of passion in the capacity of a stimulus on the irritability of the *respiratory muscles*, and the violent panting which succeeds one of the most intense of these emotions, namely venereal gratification, and which is so very disproportionate to the mere exercise which has been undergone, tends very much to strengthen the belief that it is by the same nerves which are naturally subservient to respiration, as effected by sympathy, that the influence of passion extends to distant organs. The frequent excitement of the *heart* also, producing an irregular pulse, palpitations, syncope, and so forth, from various mental perturbations, are equally familiar to every body; as is also their influence on the irritability of the *immediate organs of secretion*, in producing at one time a constriction, and at another a dilatation—the result of a previous constriction—of the capillary vessels, whence arise paleness or blushing, flaccidity or turgescence, suppressed or increased and vitiated secretions. Every body knows the almost instantaneous effect, on the one hand, of fear in blanching the cheeks, and in rendering the eye dull—which is effected by a very similar process—as well as in producing temporary impotence, and that of almost any intense emotion in occasioning an immediate suppression of the menstrual fluid, the milk, the tears, or the saliva (a); nor is any one ignorant of the equally

it is at least certain that senescence has effects somewhat similar to those resulting from castration, and that, as it turns a male almost into a eunuch, so it converts a female almost into a *vigaro*.

(a) Hence, in intense grief the tears do not flow, and it is always a proof of a moderate sorrow when this takes place; tears do not bring relief, as is commonly believed, but they indicate that it has been brought

speedy operation, on the other hand, of diffidence in producing blushing of the cheeks, of anger, and numerous other emotions in eliciting, as it were, a flash of fire from the eye (a), of venereal desire and other passions in producing the erection of the clitoris or penis, the prehensile motions of the fimbriae of the fallopian tubes, the erection of the nipples of the mammae, and the turgescence of many other organs consisting of erectile tissue, and of various other mental affections in increasing and vitiating the several secretions. Thus, with respect to the perspired secretions, the halitus from the lungs is sometimes almost in an instant vitiated by bad news, so as to produce fetid breath; and the effect of fright in increasing the discharge of the intestinal gases, and in rendering them more than usually offensive, is frequently not less instantaneous. The flow of the menstrual fluid likewise, if it is sometimes suppressed, is equally frequently increased by various emotions; and the effect of continued hilarity, on the one hand, and of absolute despair, on the other, in producing gradually an accumulation of the fat is not less remarkable (b). How instantly, also, the whole surface is sometimes bathed in sweat from dismay, most persons have experienced. Among the follicular secretions the flow of the mucilage of the vagina is much promoted by venereal desire, as that of the stools is, as every body is aware, by almost every depressing passion (c); nor is it less certain that the quantity of the sebaceous discharge from the surface, particularly that of the arm-pits, is increased by bashfulness and other emotions (d). Lastly, with respect to the glandular and folliculo-glandular secretions, it is a prevalent, and perhaps a well-founded opinion that jealousy both increases the quantity and vitiates the quality of the bile (e); and it is certain that, as numerous mental

The cleaving of the tongue to the mouth from violent emotion—the *vox hæret faucibus*—is easily explicable upon the same principles. Every body knows the story of the detection of a thief in an establishment of servants, by the dryness of the rice, which he, in common with the rest, had been compelled to hold in his mouth, while each was taxed with the theft.

(a) The fascinating power of “the magic circle of the eye,” independently of any action of its own muscles, or of those of the eye-lids, which most materially adds to its expression, is by no means a mere illusion. The eye is as capable of turning pale and blushing as the cheeks, but it is with white blood instead of red, so that fewer or more of the rays of light which impinge upon its surface are reflected. The only thing wanting to render the art of the player perfect, is a command, as well over the capillary vessels of his cheeks and eyes, as over the voluntary muscles; and even this is sometimes furnished by the force of imagination, which inspires an enthusiastic actor with some degree of those emotions, the effects of which it is his business to embody. Miss Fanny Kelly has been known actually to faint precisely at that instant when the business of the stage required that she should appear to do so; and it is probably to some such power of exciting certain passions at will that we must refer most of those instances in which the heart and stomach have appeared to be voluntary muscles.

(b) “Laugh and grow fat,” is a common saying, but “Despair and grow fat,” would be an equally true one. Persons left long to pine in condemned cells, without a shadow of hope, become, frequently, in spite of their usually slender frame, remarkably fat. Absolute despair is as incompatible with solicitude, as total thoughtlessness; and it is solicitude which emaciates. Cassius was “lean” because he was anxious to redress

his country's wrongs: had he either been indifferent to them, or despaired of redressing them, he would probably have been as “fat and sleek-headed” as any of those whom Cæsar wished to have about him.

(c) It is not, as is so generally believed, from a relaxation of the sphincter ani, that, as observed by Butler,

— “No man is master
Of his posteriors in disaster,”

but from the sudden increase and vitiation of the intestinal gases and stools, which alone are competent to explain the change in the quantity, consistence, and odour, of the discharge; and nature has even rendered this or some analogous discharge under emotion a means of security to some animals. It is thus that the cuttle (*Sepia*, 10) conceals itself, when in danger, by colouring the surrounding water black; and some quadrupeds, as the American skunk (*Viverra*, 49), when pursued, and of course put into bodily fear, void, in the face of their enemies, a mass of filth, so copious and so intolerably fetid, that they are compelled to desist from the pursuit. Some kinds of vulture, also, are said occasionally, when captured, to have recourse to a similar expedient.

(d) A raw girl, when first called upon to exhibit, before company, a taste of her quality, at the piano-forte, or in any other way, affords frequently a good example of this effect of the passions. The unpleasant odour perceived by those standing behind her is often attributed to want of cleanliness—but most unjustly.

(e) Horace speaks of his liver swelling with bile, when he saw his mistress toying with another man; and the phrase of “Green-eyed monster,” as applied to jealousy, is well known. “I will possess them with yellowness,” says lean Jack; i. e. “I will make him jealous, or give him the jaundice.”

perturbations produce a suppression of the flow of the milk, so love of offspring and other affections in an equal degree promote it, while sadness again vitiates it, and renders it unwholesome (a). The effect, finally, of venereal desire in increasing the secretion of the semen, and those of moderate joy or sorrow, and of moderate desire or disgust, in producing an inordinate flow respectively of the tears, and the saliva, however prone intense emotions may be to suppress these secretions, are abundantly familiar to us all—so familiar, indeed, that they cease to attract any attention, and are generally overlooked from the very circumstance which should claim for them the deepest attention (b). Nor is the effect of passion on the irritability of the *absorbing vessels* less remarkable than on that of the secreting; since it is to this that we must refer the blanching, in the course of a few hours, from strong emotions, sometimes the skin (c), but more frequently the hair (d), so many instances of which are on record. The remarkable effects of passion, also, on the irritability of the several reputedly *voluntary muscles*, is sufficiently displayed in the action of the various muscles by which vomiting, sighing, yawning, groaning, screaming, sobbing, laughing, distending the nostrils, turning downwards and outwards the eyes, winking, frowning, and so forth, are effected, respectively from disgust, sadness, annoyance, deep affliction, sudden and intense joy or grief, childish sorrow, mirth, exultation, rage, momentary apprehension, and displeasure; and the numerous alterations in the sound of the voice, as well as in the general expression of the features, owing to the action of numerous muscles the ordinary stimulus to which is volition, from almost every kind of mental perturbation, is well known. Similar alterations, also, are constantly perceived, from similar causes, in the attitudes and gestures of the whole body, from the tremblings of doubt and fear to the utter relaxation of wretchedness, on the one hand, and from the start of surprise to the full perpendicular of astonishment, the rigidity of terror, and the leaping and dancing of extatic delight on the other. The whole art of the player consists in a delicate perception of these efforts of passion on the muscles of the eye, face, larynx, trunk, and limbs, and in an accurate imitation of them by throwing into the same muscles the stimulus of volition.

(a) The effect, in producing a secretion of milk, of an intense desire to secrete it, have been often manifested, not only in mothers, but in young girls who have never been impregnated, and in old women who have long ceased to propagate—nay, even in males, both of the human species and of quadrupeds. Such cases of the formation of milk in young unimpregnated girls are related by Fodéré, Belloc, and others; in old women, by Stack, Montégre, and Kennedy; and in males, by Aristotle, Benedict, Donati, Borelli, Laurenberg, Paulline, the Bishop of Cork, Humboldt, and Blumenbach.

(b) When we reflect on this tendency of the passions to change the character of the several secretions, and remember that it is by the secretions of the mother that the fetus, during its whole organization, is nourished, we may perhaps be excused from at once chiming in with the accustomed cant that the emotions of the mother “cannot

possibly” have any effect on its organism. We “cannot possibly” explain, perhaps, what is the immediate process by which such vitiated secretions have this effect, till we know a little more of the *vis plastica* than its numerous appellations; but neither can we explain, till then, why this effect should be impossible. It is much easier, in these matters, to look shrewd and *incredulous*, than to give any good reason for our unbelief; and if the result, if no process—however well accredited—is to be believed in, till the nature of that process has been satisfactorily explained, we must suspend, for the present, our belief in our own existence.

(c) Journal of Science and the Arts, 1819. Frorieps Notizen, 1826, &c.

(d) Innumerable instances of this occurred, it is said, during the infatuated scenes of the French revolution; and there are few, whose experience does not furnish one or more examples of it.

SELECT LECTURES,

FROM

M. BROUSSAIS'

Course of General Pathology and Therapeutics;
translated and revised

BY JAMES MANBY GULLY, M.D.

LECTURE VI.

Articular Inflammation.

ALTERNATIONS therefore of heat and cold are the necessary condition for the develop-

ment of arthritis, and for its conversion into gout. The latter, however, is frequently not the consequence of the former, as we see in some northern tribes, that are barbarous and habituated to the inclemency of the weather. A traveller who lived seven years with the North American Indians, tells me that the only disease they are afflicted with, is acute arthritis, which they treat by making an oven in the ground, and after heating it, plunging up to the neck in it. Whether this mode cures them or does not, they have

no gout; arthritis is the only articular disease to which they are subject, and even that, they rarely have, inasmuch as they are accustomed to the effects of cold.

Another reason that leads me to think that gout is not always dependant on a chronic affection of the stomach and liver, is that it sometimes comes on in youth, even immediately after puberty, without a shade of gastritis, but solely in consequence of cold. I have seen it in this condition: but it is not often observed, because in youth there is great susceptibility and facility in disseminating multiplied irritations and phlegmasia.

Such is the etiology of articular inflammations, according to the present state of our science. We have now to describe their development and progress in the manner pointed out by our own observation and reflection. I commence with arthritis, because it is the most acute form of articular phlegmasia. It frequently comes on after the impression of cold when the individual is warm, and vice versa. A man that has walked himself warm, and then sits down until cold seizes him, is in a good condition to be attacked with arthritis: or on the other hand, if having the extremities almost frozen, he suddenly approaches the fire to warm himself rapidly, he will be seized with pains upon which arthritis may supervene: whereas had he warmed himself gradually he would not have run the risk. These are very common causes of arthritis. It also appears as a sequela of several kinds of inflammation, variola for instance, particularly in cold seasons. A convalescent from a gastro-enteritis being chilled contracts a peritonitis: you then sometimes see the articulations of the trunk seized at the same time with inflammation, especially the sterno-clavicular joint; and this effect is more probable, as the individual may have been warm when the cold seized him. In such an instance the nature of the arthritis is not changed: it is still the consequence of cessation of the skin's action, a cessation that is succeeded by a transfer of action on more or fewer serous and fibrous tissues, as those of the articulations. But this transferred action, which might have gradually subsided had it been slowly enacted, is transformed into a phlegmasia when the impress of cold has been suddenly replaced by that of heat. The chief causes of this transformation is in my opinion the irruptions of blood into joints that are previously cooled, whereby they are heated and irritated.

Arthritis commences with pain, swelling, but slight redness, and sensibility to pressure in and around the articulation. To ascertain the degree to which the inflammation has penetrated, the joint must be moved and somewhat distended; and thus we learn how far it involves the ligaments and whether it is capsular. The disease may occupy two, three, or four joints at once, remain therein

a day, and then pass into others: it is almost always ambulatory. It is propagated and disseminated. Sometimes one articulation only is affected after another: at other times the propagation is to the limb, the surrounding cellular tissue swelling and inflaming to the degree of phlegmon. You need not be astonished at this: all forms of all irritations are capable of being converted into each other. If then in the course of its peregrinations the irritation falls on an articulation that is well supplied with cellular tissue, such as the knee or hip joint, a phlegmon may ensue upon it, that shall either be confined to the immediately circumjacent cellular texture or penetrate into that of the joint, or even into the capsule. This propagation may take place primarily or secondarily: primitively, when the impression of cold is confined to one large joint and directly causes in it a phlegmonous tumefaction: secondarily, when the arthritis does not produce phlegmon in a large articulation until after it has traversed some smaller ones.

The disease is disseminated. The irritation is first communicated to the neighbouring muscles, which contract, flutter, are convulsively agitated, and then remain motionless; then to the nervous system, whence the heart is stimulated and fever originated, the degree of which is always in proportion with the articular phlegmasia. How often have I not seen two or three painful articulations with febrile movement—seen the latter diminish and the pulse relax on the cessation of the pain, then again the acceleration of the pulse when the pain returned, or when a phlegmon formed: and this in as regular a manner as to obviate all doubt that the febrile state was subordinate to the articular irritation. When that irritation is transferred to a joint more ready to contract a phlegmasia than that which it had left, the pulse becomes stronger and more frequent. Together with the fever we always meet a state of general malaise and diminution of appetite, this last varying, as the fever does, with the degree of phlegmasia, disappearing when it is intense, reappearing when it is subdued. But a febrile movement is not always the only event. The viscera likewise receive their portion of irritation: the secretions become disordered, the tongue is mucous, the biliary secretion excessive, and there is a tendency to vomiting: a specific power is exerted in the follicles of the skin, by virtue of which they secrete a sort of oily matter, and the patients appear as if they had been smeared with some fatty substance. Things may go much further, particularly if the subjects are disposed to inflammation, if, for instance, the disease attacks a man whose manner of living has been too exciting, and such as laid him open to a gastro-enteritis that only required a circumstance to be developed. In such case all the phenomena are exhibited in a much more violent form; the patient not

only suffers in the joints, but also suffers from an overwhelming anxiety and immoderate thirst, the tongue becomes vividly red, and, in brief, inflammation is generated in the digestive canal; and as arthritis disposes to the more acute sense of internal pains, the kind of gastro-enteritis experienced may, like the inflamed articulations, be painful to the touch. Should the patient be one disposed to pulmonary congestion, such a congestion, or only a bronchitis, may occur and accompany the arthritis. Acute pneumonia, however, is not often coeval with intense arthritis, for nature is not able for so many points of phlegmasia simultaneously. More frequently a violent gastritis or pneumonitis put a stop to the arthritis.

The influence on the gastric apparatus is more marked in the other form of the arthritis, which is primitively mono-articular, because that form attacks individuals that have suffered in the digestive canal, and have frequently had the liver and the heart in a morbid condition. If, however, acute arthritis takes place in persons having this ordinary pre-disposition to gout, the visceral phlegmasia may become predominant: but in the contrary event, it proves rather a revulsive and preservative means—at least for a time—to the viscera. Still it does not follow that even failing this predisposition, there is any occasion to be astonished at seeing an arthritis cease, and a gastro-intestinal phlegmasia cause it to be entirely forgotten: this occurrence constitutes what is called metastasis or repercussion of arthritis, an occurrence that should not be confounded with the repetition of the pain of that affection in the viscera. There are, in fact, two principal phenomena of arthritis, pain or neurosis, and sanguineous congestion. Pain may be excited in some internal part, as the intestines, even to an excessive degree; in the heart, with palpitations, without any immediate inflammation: so also there may be retention of urine with pain, yet without cystitis. But if there is as yet no existent inflammation, there is a state of irritation that borders close upon it, and to which we must not trust; for *ubi stimulus ibi fluvius*: where to-day there is only a rheumatic affection, to-morrow an actual phlegmasia may rage. All manner of conversions are possible in the infinite shades of our diseases, and one value that I attach to my method of viewing disease is founded on the fact, that it accustoms the physician to feel no surprise at any phenomenon that may present itself.

The duration of arthritis is various. Left to itself it may be prolonged to a month, six weeks, three months, according to the season, and other influences. At the time when, like you, I was a student in this school, it was recommended to respect arthritis from a fear of inducing metastases; some practitioners, therefore, contented themselves with treating it in a mild and inert manner,

by which time was given for the irritation to take its rambles and produce deposits. Nor was that all: after wandering for an indefinite period about the splanchnic cavities, the arthritis finally penetrated them, and then came a scene of embarrassment, thence arose a source of danger. And as the season has a considerable influence over the progress and duration of the complaint, those who were attacked in the winter had to fear its further prolongation; those who fell under it in the spring time, a period when the visceral apparatus are more disposed to inflammation, had to fear the invasion of those apparatus. Yet it was not always entirely left to itself; various treatments were put in practice. It might be confined to the joints, remain there for a longer or shorter period, and disappear without internal disorder; but it always left behind a certain degree of stiffness and engorgement in the immediately neighbouring parts of the articulation. It had a tendency to return, and was even more or less periodical. Had the capsule been involved, there sometimes remained a dropsical affection, or sero-purulent collection, which in time were dissipated, or were followed by ankylosis or led to irremediable alterations of structure, for which no remedy but amputation remained.

What light do dissections throw on the subject? I have had many opportunities of performing them in the first degree of the disease. We meet with the following appearances:—pus around the articulations, almost always in the cellular tissue between the skin and ligaments, and inflammation of the capsules. Sometimes twelve hours suffice for the formation of pus in an articulation, when the arthritis has taken place in one in a febrile condition, and who was previously superexcited, particularly if he is labouring under an eruptive phlegmasia. In general, when the inflammation is vehement, as it is observed to be subsequently to a repercussion of the transpiration from the entire surface, suppuration is effected with astonishing rapidity, six or eight hours being sufficient to produce it. Blood is occasionally mixed with the pus. When the inflammation occupies a large joint, extensive abscesses may form in it. I say nothing of internal phlegmasia, because this is not the place for it, and it is a bad plan to accumulate descriptions, for if we do so we may repeat them after every particular disease.

The prognosis of arthritis, if it be not extensive, and occupies only the small joints, is not adverse: we may at once attack it in its position, and disperse it. It must be observed that the longer it lasts, the more it tends to the internal parts. At each relapse it approaches nearer to the centre; from the hand it goes to the elbow, from the elbow to the shoulder, then to the vertebra, in their several ligaments and capsules: frequently it fixes itself in the articulation of the first

and second vertebra. In general the further from the centre the inflammation is, the less severe it is. The larger the joints it involves, the greater the fear lest it take on the phlegmonous form, and be followed by fistulæ and caries. As regards repercussions, you need not be over frightened of them; very often internal pains are experienced without any internal phlegmasia. They are, however, possible, and the danger is then proportionate to the intensity of the visceral inflammation.

Arthritis has been variously treated. Large general bleedings have been practised; but few physicians of past times thought of combatting it with local bleedings. Especial regard has been had to the slimy condition of the tongue, and to the secretion over the diseased point, and over the entire skin; and it has been considered as essentially lymphatic and calculous. Recourse has consequently been had to sudorifics and purgatives, and as considerable pain has mostly been an accompaniment, narcotics have been added to them; thus they went on to the end of the attack. Some have specially opposed emetics to it: at one time I used to see this in great vogue in Paris, as many as seven or eight emetics being administered. Some of the more robust stood out this treatment, but the majority thereby contracted one or more phlegmasiæ of the viscera that killed them. I knew a professional brother, who gave his wife seven emetic doses in quick succession, in arthritis; from the latter she recovered, but she continued in a state of extreme nervous susceptibility and a few years after died of a chronic gastritis and diseased heart, the consequence of this mode of treatment. An attempt has also been made to apply Rasori's method of administering tartar emetic in divided doses so as not to produce vomiting. I have made inquiries of practitioners that have put this method into practice in a rational manner: for, as regards myself, I make very little use of it except in cases of urgent character, since it appears to me that we have no more right to play with tartar emetic, than with arsenic, a loaded gun or a double edged sword. However, it appears that when it has been given to persons of dull susceptibilities the large doses of tartar emetic have been tolerated, have slackened the progress of and occasionally cured the disease; yet many practitioners have given it up whilst others persist in using it with varied degrees of daring success.

The best method, I opine, is to attack the disease vigorously in the very point it occupies. Thus, the diseased part should be covered with leeches, unless a plethoric condition or congestion of the great viscera indicate that we should begin with a general blood-letting. If you only put on a small number of leeches compared with the intensity of the inflammation and the quantity

of blood in the individual, you will not cure, and may very possibly stimulate, the inflammation. But if you follow it up for two or three days successively, with copious local bleedings, you may almost always succeed in putting a stop to it. This practice I have found to answer remarkably well; but there are cases in which the stomach seems inclined to retain the irritation. In such you must combat it with leeches to the epigastrium as well as the articulation; do not, however, imagine that you can cure every arthritis by treating the stomach. After leeches, you should employ local demulcents; ice has been lauded, but its employment should be regulated by the degree of reaction; it may be good when the heat is excessive, otherwise not; and we have reason to fear lest it should produce a transfer of the irritation to the interior. Emollient poultices are preferable, or combined with narcotics, according to the pain and inflammation; do not believe what has been said about their relaxing the part until it is œdematous. After these means come oleaginous liniments, flannel, resolvent liniments, mercurial or iodated, and, in cases of serous infiltration, compression and revulsives.

If the phlegmasia has fixed on the viscera, after leaving the joints, it should be brought back to the points it last occupied, or where it was in greatest force. Baths should also be used. Sudorifics are useless, particularly if there be a febrile movement; they are only proper when the viscera are entirely free, and the local gorging alone exists; indeed, as a general rule, sudorifics and warm baths are hurtful during the acute stage. The fæces should be got rid of by laxative and emollient glysters, or even by a purgative, care being had that it does not injure the digestive organs. Narcotics should be given for the pain. The fever past, nutriment may be given; but it should be suspended immediately on the slightest tendency to its return. After which, you should be inactive, and not insist, with a sort of systematic obstinacy, either on sudorifics, or purgatives, or emetics, or even on antiphlogistics, but always be led by the case and the indications.

Gout.—We now proceed to speak of gout. I told you that, like the preceding, gout was an affection of the joints, of which people have always strived to make an entity; but I also told you it appeared under different circumstances. I shall endeavour to give you a notion of it that shall exhibit facts in the most accurate way, without any prejudgement of nor commentary upon its nature.

By the term gout is designated an articular phlegmasia, which ordinarily commences in a single joint—a mono-arthritic phlegmasia—most frequently by a small one—a micro-mono arthritic phlegmasia, we may call it, in order to make ourselves in-

telligible in the smallest number of words. This phlegmasia may develop, under the influence of cold alone, without any internal predisposition, without an advanced age, without a plethoric constitution, in short, independently of all the conditions on which the gouty entity has been grounded. But that we may stay by facts, we must state that most frequently it is manifested in persons advanced in age, particularly in those whose parents have been affected with it, who are plethoric, who live well and in the midst of plenty, who have lost some customary sanguineous evacuations, and who have been affected for a varied period with a gastro-duodenal irritation, with more or less congestion of the liver. This phlegmasia commences in a small articulation of the foot or hand, but does not immediately spread over a number of them as in the preceding arthritis.

Sydenham has described the gout remarkably well: we shall follow his description, not because it is Sydenham's, but because it is consonant with nature.

A sthenic or hypersthenic gout has been erected for robust persons, and an asthenic or hyposthenic gout for delicate persons; we shall see how far this distinction holds. Individuals in whom gout is commencing experience, most commonly, during the night, pains in the articulations, generally in the great toe of one foot, or in the index or thumb of one hand, but most frequently in the great toe; they look at the foot and observe a swelling and a kind of sub-erysipelatous redness; they have a shivering fit and febrile movement when the pain is acute. The fever and pain pass away in the course of the following day, and the patient thinks himself well; and in fact he sometimes does get off for so much; but at other times the articulations are again seized, and the symptoms reappear several successive times. At length they cease entirely. Such is the nature of the first attacks.

Subsequently, these attacks are observed to be preceded by some internal disorders, and we remark an excess of irritability, an increase of the venereal appetite, foul mouth, heaviness of head, malaise, and a vague inquietude. These phenomena, which indicate a disordered state of the visceral apparatus, have been considered by the humoral pathologists as the effect of a humour seeking where to fix itself; by the solidists, as a state of nervous debility; by the philosophico-abstractive physicians, as a restlessness of the vital principle, and of the gouty entity. We may remark, en passant, that all classes of authors are reducible to three—the material solidists, the material humoral theorists, and the abstractives.

Such attacks as this may happen in a young man of from fifteen to twenty years, in consequence of cold feet, and in a man of from twenty to forty from a similar cause, without the accompaniment or pre-

lude of any gastritis: of this fact I have certain evidence, though it is more usual to see a gastritis. One, two, or three years afterwards the paroxysm returns, and is then longer, and a greater number of articulations is implicated. The returns most commonly occur in spring and autumn, seasons in which vicissitudes of temperature are more frequent. Sometimes, five, six, eight, or ten years pass over without any return; but more generally gout returns every year, and finally is reiterated several times in the same year, not only in one or two fingers or toes, but in all of them successively. The irritation communicated to the interior is not so readily dissipated: it is no longer confined to a slight febrile attack ending in sweats: an internal malaise is always present, which is frequently the more distressing, as together with the gastro-duodenitis, a stimulating diet, or other causes are in action, this gastro-duodenitis meantime advancing at the same time that the articular phlegmasia does. Arrived at this point, the disease may return three or four times in the year, and even in the summer; it may disappear in a fortnight or six weeks, or be prolonged two or three months. Like arthritis, it tends to the production of engorgement around the joints, especially if it returns before the previous congestion has had time to be entirely dissipated. At each fresh afflux towards the joint it becomes larger, and the engorgement that remains after the acute stage establishes in it a permanent sub-inflammation.

On the other hand the internal phlegmasia advances; the patient becomes more and more subject to the phenomena of chronic gastritis, duodenitis, and hepatitis, or even to pulmonary congestions, and he becomes valetudinarian. Thus two phlegmasias are going on at once, one external, visible, the other internal, invisible, dependant on the former, but sometimes pre-existing, either being capable of existing without the other, and in an independent form.

At length a period arrives when the articulations remain swelled, mis-shapen, and painful, and when there is no longer a necessity for any very active causes to develop the gouty attacks. The visceral impulse consequent on the lesion of the gastric apparatus becomes less essential to their return. In a further stage, when both these causes concur, that is, when to the permanent sub-inflammatory state of the articulations a similarly permanent state of the viscera is superadded, the slightest disorder taking place in the functions of the latter reacts on the joints and produces pain therein; and should this disorder amount to some considerable degree of irritation, it gives rise to fresh and well characterized articular inflammations, which may in turn diminish, and for a short time even efface the visceral affection, so that the irritation

shall predominate sometimes in the internal, sometimes in the external parts. This is observed through a long series of years in a gouty subject, with varied frequency, with varied degrees of violence, according to his way of living and his diet. You may imagine that at length, when disorganization is considerably advanced in the joints, there is no possible chance of affecting resolution. Yet the patient never dies from *their* disease. Were the end of his career dependant on them, he might live a couple of hundred years, according to Hufeland's calculation, who thus reckons the duration of man's life, grounding his reckoning on the principle that every animal is capable of living eight times the period of his incrudescence, and as man requires twenty-five years to arrive at his full development, it follows that he ought to be able to live two centuries. I know not whether this conclusion be correct, with reference to the natural condition of man, but in society, as it now exists, it is far from being correct. In proportion then as the disease advances, the visceral affection makes progress, and by it death at last closes round. Do not suppose, however, that it happens in a fixed and certain manner, and by a cause exclusively peculiar to gout. Gouty people die sometimes by a chronic gastritis, or duodenitis with hepatic turgescence, sometimes by cerebral congestion or effusion, sometimes by pneumonia, or by aneurism of the heart, consequent on rheumatic affections. In general, gouty subjects live to an old age, and the vulgar axiom, that they die by a repelled gout, means nothing more than it is under a disorder of the brain, of the heart, or some other important viscus that they sink.

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LECTURES

ON THE

PHYSICAL EDUCATION AND DISEASES OF INFANTS,
FROM BIRTH TO PUBERTY.

BY DR. RYAN,

*Delivered at the Medical School, Westminster
Dispensary, Gerrard Street, Soho;*

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LECTURE XLI.

Ulcerous, Pustulous, and Gangrenous Stomatitis—Glossitis. Development, and Diseases of the first Dentition.

GENTLEMEN—I concluded the description of the aphthous form of stomatitis at our last meeting, and shall now direct your attention to other species of that disease.

4. *Ulcerous Stomatitis*.—This species of stomatitis is caused by inflammation of the mucous membrane of any of the parts which compose the mouth, cheeks, and throat; and is a different disease from aphthæ.

It appears as the result of inflammation or ramollissement of the mucous membrane, and is not preceded by any aphthous appearance.

The treatment should be antiphlogistic when leeching, purgation, warm bath and counter-irritation are to be employed; and when ulceration is established, the same remedies used for aphthæ are necessary. Slight escharotics are useful in obstinate cases, and if gangrene supervene, we should have recourse to the remedies for that disease which I shall mention immediately.

These ulcers appear on and under the tongue, on the cheek, and soft palate, arch of the palate, and roof of the mouth, and according to M. Billard, are often fatal. We frequently see them in cases of adults whose degeneration and general health are bad, and also towards the termination of certain chronic diseases.

5. *Pustulous Stomatitis*.—M. Billard employs this term to characterise the inflammation of the buccal mucous membrane, which is developed during the progress of small pox, and which gives rise to pustules analogous to those on the skin. He does not state the exact seat of this form, but says that it is to be treated on the same principles as small pox.

6. *Gangrenous Stomatitis*.—This was termed gangrenous aphthæ by Dr. Underwood and subsequent writers, and is graphically described by M. Billard. Gangrene of the buccal mucous membrane, or of the soft parts that form the cavity of the mouth, may succeed the different forms of stomatitis already described, but particularly the follicular species of that disease.

When aphthæ terminate in gangrene, their edges assume a burned, torn, and soft appearance; they present a brown eschar, which when detached, leaves an open surface, of vermillion and granulated aspect. The eschar is sometimes covered with a soft pultaceous substance of a brown colour, and with an evident gangrenous odour. The surrounding parts become swollen, are of a violet colour, and are soft and easily depressed. The mouth of the infant, always open, allows the escape of the saliva, the face is pale, there is great prostration of the vital powers, and an absence of the fever. The pulse is extremely feeble, the skin is cold, pale and insensible. After some time, vomiting, diarrhoea, tumefaction of the abdomen, and sometimes hiccup supervene.

Gangrene consequent to aphthæ is extremely fatal, as it is accompanied by great prostration of strength, or to use a common term, by debility. The indications of treatment are to support the strength and correct the state of the affected parts. The best means to accomplish these indications, are to support the strength by aromatic spirit of ammonia, wine, quinine, animal and vegetable jellies; and to touch the gangrenous parts

with a solution of chloride of lime or soda, or with sulphuric, nitric, or muriatic acid, by means of a capillary glass tube. A mucilaginous fluid acidulated with some of the chlorides or acids just mentioned, may be applied to the gangrenous parts of the mouth with a piece of soft sponge, or some lint tied on a piece of wood or whalebone. Some advise the application of a solution of alum, and others prefer the nitrate of silver (lunar caustic), or the fused potass formerly called the lapis infernalis. The first mentioned remedies are most efficacious according to my own experience.

There is another form of gangrene of the mouth, which is not preceded by inflammation. This disease is well described by some modern French physicians. MM. Baron, Guersent, Jadelot, and Isnard, have most graphically described it. The first and last of these authors have treated of it the most successfully*. Van Swieten in his learned Commentaries on Boheraave's Aphorisms on Diseases of Infants, has described gangrene and destruction of the gums; but the disease under notice extends to and affects the mucous membrane, and the parietes or structures that compose the cheeks.

I have already stated that the hands, feet, and external genital organs of female infants may be attacked with gangrene, and so may the soft parts that compose the mouth. Infants who are feeble at birth, or affected with chronic or severe diseases, are most liable to it.

According to MM. Baron and Billard, there are two forms of this disease. The first presents a circumscribed œdematous swelling, characterized by an oily appearance of the skin, and by a central point, which is more or less hard, over which there is a dark red spot either on the internal or external surface of the cheek. In cases of young infants there is no fever. An eschar forms on this central spot from within outwards, the mucous membrane becomes disorganized, all the soft parts to the periosteum mortify, and fall off in shreds, mixed with a sanguineous dark fluid, the parietes of the cheeks and gums are destroyed, are expelled from the mouth, and exhale a foetid odour. This is the second degree.

This disease must not be confounded with gangrene of the mouth, accompanied by malignant pustule, which commences on the cheek; or as M. Rayer has remarked, the first differs from the malignant pustule, as the gangrenous inflammation commences in the interior of the mouth, and extends consequently to the skin. This form of gangrene

often succeeds small-pox, measles, and scarlatina, and the face and extremities are œdematous at the same time. A similar disease to this attacks the external genital organs of female infants, and they often die of gangrene of the vulva. Dr. Percival and Mr. Kindar Wood, of Manchester, have graphically described this gangrene, and their account of it will appear in the article on the diseases of the genito-urinary organs.

Treatment.—The treatment must be modified according to the stage of the disease. When there is œdema of the cheek it is to be treated like that of other parts, by purgation, diuretics, diaphoretics, cold applications, as spirit lotion, or one composed of hydrochlorate of ammonia with nitrate of potass. When the œdema is circumscribed, it may be removed by frictions with the liniments of ammonia, and if the part become red a leech or two should be applied.

When these remedies fail, and the disease advances, the affected part becomes purplish or black, and there is erosion of the cheek internally, it will be necessary to cauterize the central point of the tumefaction with hydrochlorate of antimony introduced through a crucial incision made on the external surface of the cheek, or to apply a wire at a white heat, as strongly advised by M. Baron. He prefers it to potential cauteries, as these destroy too much surface and cause greater deformity than his application. Fomentations and emollient cataplasms are necessary after either application, and the mouth ought to be washed with a mucilaginous acidulated gargle, to detach the eschar and moderate the inflammation. This plan often arrests the progress of the disease much better than constitutional remedies. The constitution should, however, be supported by the use of beef-tea, chicken-broth, milk, light wine, in small quantities and diluted with water. The best wines are Malaga, Bucelles, or Sherry. It is always to be remembered that though there is great debility, the digestive tube is often the seat of irritation or inflammation (gastro-enteritis), and therefore stimulating medicines or drinks will only increase it. If there is no symptom of gastro-enteritis, no pain on pressing the abdomen, no vomiting, a cautious use of stimulants is indicated. Modern pathology teaches us, however, that abdominal inflammation often exists without the usual symptoms. M. Billard has related two cases in point. The French are too fearful of intestinal inflammation, and withhold the use of stimulants on this account in almost all diseases. This is very often correct, but the universal application of it in all diseases is decidedly erroneous according to my experience. Thus I treat numerous dyspeptics with tonics combined with aromatics, both at the Hospital and Dispensary with success, as you daily observe; and many of these patients would be treated on the antiphlogistic plan by others. The diagnosis between func-

* Baron, Mem. Sur une affection gangreneuse de la bouche. Bullet. de la Faculte, 1816. Isnard, Dissertation Sur une affection gangreneuse particulière aux enfans. Paris, 1818.

tional and structural dyspepsia is easily drawn. If the symptoms be aggravated by warm fluids, such as tea, dilute spirit of any kind, there is every reason to suspect gastric or intestinal irritation, caused by congestion or inflammation of some portion of the gastrointestinal mucous membrane, and in such cases mucilaginous drinks, leeches to the stomach, and enemata are the remedies. But if the patient is relieved by warm stimulants, which is the case in nine instances out of ten, the bitter infusions with ether, and oil of peppermint, with proper attention to regimen, will effect a cure.

I have also repeatedly observed the good effects of stimulants in the last stage of infantile remittent fever, in which there is great reason to suspect intestinal inflammation or ulceration; and similar good effects are derived in the last stage of typhus from stimulation. I have been in many consultations during which some opposed stimulation on the grounds already stated, the majority advised it, and a marked improvement was the result. The reverse has happened in other instances. It appears to me that if the patient be sinking, even though there be reason to suspect intestinal inflammation, and when the time for employing antiphlogistic means has gone by, we are justified in using stimulants. Glossitis or inflammation of the fleshy part of the tongue is not a disease of infants at the breast, though sometimes observed in children from the seventh year to the adult age. The mucous membrane which covers the tongue is very often inflamed in young infants when affected with stomatitis (inflammation of the mouth), aphthæ or thrush. Glossitis of adults may terminate in scirrhus or cancer, a result I have observed in two cases.

Development and Diseases of the First Dentition.—I have slightly alluded to this subject on a former occasion, and contended, that dentition or teething is a natural function, and would not be productive of pain or any diseases, were the infant in perfect health and its physical education properly conducted. Repeated observation has convinced me of the truth of this conclusion. I have frequently known a vast number of infants, who were managed according to the principles I have laid down for their physical education, that suffered no inconvenience or pain during dentition: in fact, they cut their teeth without their parents or nurses having been aware of it. But infants, in general, suffer severely during dentition, as most of them are affected with irritation in the stomach and bowels, in the organs of the head and chest, in consequence of errors in diet, clothing, exposure to cold, &c. Irritation in the digestive apparatus will extend to the gums, or irritation in any part of the body may derange the whole economy.

There is great importance attached both by medical practitioners and the public to the

pathological phenomena connected with the development of the first dentition. These are very erroneously, in my opinion, attributed to the effort which nature makes in effecting the eruption of the teeth. I shall therefore describe the teeth from their first appearance in their sockets, to their eruption through the gums; and then consider the pathological phenomena of dentition.

There is a vast discrepancy of opinion between physiologists on the development of the teeth. I shall, therefore, quote those who have most minutely examined the function of dentition. Among these are the industrious M. Billard, who not only adduced the chief conclusions of preceding writers, but made numerous dissections, on the results of which he bases his own views on the subject. These I shall give in a condensed form, avoiding all hypotheses.

There exists between the dentary follicles and those of the maxillary bone, which conceals them, very remarkable relations.

The alveolar process of both jaws, in the infant about the third month, consists in a unique groove straighter towards the median line than towards the molar region, and this groove contains a mass of follicles, which, without uniting, are nevertheless so intimately grouped, and appear to form a unique multilobate mass. From the fourth to the fifth month these lobules, which are dentary follicles, are more distinct, instead of being grouped, as it were, one over the other, form an elongated cluster, usually composed of eight distinct follicles; they are so contiguous that they may be raised from the maxillary groove, and if care be taken in the dissection, we may raise with them the dentary artery and nerve, which serves them as a pedicle. If we now examine the alveolar cavity, we find that it presents on its lateral surfaces small projecting points which adhered to the follicles already mentioned. As the infant advances in age, both unite and form transverse septa or partitions, the spaces between which constitute the alveolar processes or sockets of the teeth. The follicles between the sockets are now supplied with nerves and arteries.

Most physiologists admit that the fang, or root of the tooth is supplied with blood, but that the enamel is not, as no injection has ever penetrated it. John Hunter concluded that the teeth were not vascular; and Blake concluded directly contrary. Beclard observes, "we can, I believe, say that the ivory of the crown has not vessels continuous with those of the pulp, but that, nevertheless, it receives continually a fluid which penetrates it by imbibition, that it is probable in regard to the pulp there is the same relation with vessels, as between the hairs, nails, and horns with the skin. *Dict. de Médecine ou Repertoire General des Sciences Med. &c.* t. 11, Paris, June 1835.

At the period of birth there are generally

five distinct sockets in the lower jaw. Each follicle is isolated in its socket.

The alveolar processes are lined by a very thin fine membrane, and the follicle is composed of two membranes, which are discovered with difficulty, according to John Hunter, Fox, Blake, Bichat, Meckel, and others. Meckel says there is a fluid between them, which is more or less abundant in proportion to the age of the foetus. The external one is, according to him, more relaxed, soft, and spongy, than the internal. It is continuous with the gum. The internal membrane is harder and thinner. It forms a sac distinct from the external one and the gum. Its connexions with the teeth are more intimate than those of the external one, for it is properly speaking the formative organ. The dentary vessels expand upon it, in a very evident manner, and when injected are very evident*.

About the fifth month of uterine gestation, the rudiments of the incisor teeth develop themselves in two or three points on the superior part of the internal membrane. These points unite and form a bifurcation, of which the incisors often retain the form on their appearance. These primitive points of induration form scales, which are surrounded by a soft pulp, to which they firmly adhere. It is evident that they are the product of a secretion from the surface of the dentary germ, and the ossification proceeds from above downwards, takes the form of the crown of the tooth, presents a depression or circular neck, from which the neck or root is developed. It is also necessary to state that the ossification proceeds from within outwards. The process of dentition commences in the lower jaw, and advances more rapidly than in the upper. On the fullest consideration of all the facts observed on this branch of physiology, the following conclusions have been drawn:—1, that the teeth are the produce of a secretion, as maintained by the illustrious Cuvier; 2, that their development advances regularly, according to the progress of ossification of the maxillary or jaw-bones; 3, that their appearance above the gums, results in some measure from the development of the teeth, and from that of the alveolar arch; 4, that the cause of the successive appearance of the first and second incisor teeth, of the first molar, and next of the first incisor, is altogether mechanical; that it depends on the more or less perfect formation of the alveolar process intended for each of these teeth, and on the more or less perfect manner in which each tooth is implanted in the maxillary bone.

Many other eminent physiologists besides those already mentioned, have considered the progress of the development of the teeth

in relation to that of the alveolar processes and maxillary bones*.

All the world knows of the changes which the teeth pass through in the different periods of life—that at birth there are none to be seen—that by and by they present themselves—then again disappear, to be replaced by another set, which are themselves in turn frequently cast away before the termination of a natural life; and yet few persons, even those most apt to pry into the causes of passing events, ever think of inquiring why or how do those changes come about? They manifestly take place in accommodation of the stationary character of teeth, as regards size, with the varying dimensions of the jaw-bones at different ages. The teeth, in consequence of the chrystalline enamel which encrusts their exterior, have not a power of enlargement like the other bones of the body, and consequently those which are suited to the capacity of the mouth of a child would be ill adapted to the enlarged jaws of an adult; they are then thrown off and new ones of an appropriate size generated. The shedding of the teeth in old age arises from a different cause and is followed by a very different result. The teeth like their possessor become old and infirm; the circulation of blood in them is obstructed by a clogging up of the holes in their fangs, through which the nutritious vessels find an entrance; and they undergo a premature death. In this state, no longer acting in reciprocity with the living parts about them, they are loosened and ejected from the mouth.

It would be foreign to our present purpose to notice all the anomalies of dentition: how some infants are born with teeth, King Richard III.—Louis XIV.—Mirabeau, and others—how other individuals arrive at the adult age without a single tooth, as was exemplified by a former pupil known to some gentlemen now present; and lastly, how persons at the age of 70 or 80, who had lost all their teeth, were supplied with a new and complete set. You will find a vast deal of information on this subject in Good's Study of Medicine, and in the various treatises on physiology. Some of our surgeon dentists have also accumulated many singular facts of the same description. To these writers I must refer you.

For this reason I shall not cite examples of molar teeth having been developed in place of incisors, or when many of the teeth are wanting or are in close apposition by tartar, or bony union of the crown and roots, as mentioned by Fox. I am only noticing at

* Manuel d'Anat. general. descrip. et path. par J. F. Meckel traduit par A. Jourdan et G. Breschet, Paris, 1825.

* M. Lévillé Mem. sur les Rapports qui existent entre les premières et secondes dents, etc. Mem. de la Soc. Med. d'Emulat. op. cit. Miel, t. 9. M. Delabarre, Methode Naturelle de diriger la seconde dentition, Paris, 1826.

present the anomalies of the teeth before and immediately after birth.

Dentition is a natural function and is often accomplished without disturbing the health. It is generally accompanied by an increase of saliva, the infant drivels, the gum is red, hot, painful, and swollen. The infant puts its fingers or whatever it can grasp into the mouth and presses its gums upon it, which excites absorption and promotes the cutting of the teeth. Pressure, however, is not borne when true inflammation is present, but only when there is the natural excitement, pruritus or itching of the gums. In some cases there is intense inflammation or congestion of the gum, in others there is hæmorrhage into the alveolar processes, or ulcerations, but these cases are of very rare occurrence. M. Billard gives autopsies or dissections of such cases. In other instances there is general redness of the mucous membrane of the mouth, with all the characters of erythematous stomatitis, fever, vomiting diarrhœa, and sometimes gastro-enteritis. In other cases, a severe aphthæ, gingivitis, or gangrene supervenes. A vast number of infantine diseases is attributed to dentition, and it is said to destroy many infants. It is true that inflammation of the gum may irritate the whole digestive tube, the brain, and the respiratory organs, in the same manner as local irritation or inflammation in any part of the body may derange the whole economy. The injury of one nerve may derange the whole, produce convulsions, tetanus, or death. It is for this reason that we have not only the usual symptoms of pain in an inflamed or irritated part, but also in many remote organs, a fact that those uninitiated in medicine cannot comprehend. Thus dentition may cause determination of blood to the head, inflammation of the brain or its coverings (cerebritis, meningitis), water in the head, and likewise inflammation of the throat, œsophagus, stomach and bowels, diarrhœa, cough, and inflammation of the lungs or their coverings.

Many infants have disturbed sleep, and become fretful during dentition. There is a natural salivation which supple the gums; and the infant, like all young animals, bites all bodies it can grasp. This pressure is useful in causing absorption of the gums; and it is for this reason that rings of ivory, bone, glass, coral, and gum-sticks, are employed with advantage. These, however, are hurtful when the gums are red, hot, and inflamed, as the point of the tooth presses on the inflamed gum. At this time softer substances are used—such as India rubber rings, dried figs, &c. These substances are moistened and softened by the saliva, soothe the tissue of the gums, and prevent inflammation.

The treatment of the local complaints of the first dentition, ought to be simple. The plan proposed by the celebrated Boerhaave

is one of the best. He advised the application of emollient, mucilaginous, and refrigerant lotions to the gums; antiphlogistics, hard gum-sticks, and incising the gums with a lancet. He recommended cream, the white of egg with syrup of violets, or rose water. This gargle was to be applied to the gums on lint. Others have added a small quantity of laudanum. This is the chief ingredient in all patent vegetable soothing syrups for cutting of the teeth. It requires to be used in a very small quantity, not more than two or three drops at a time. It may be swallowed with the saliva and narcotise or poison the infant*. When there is heaviness and constant tendency to sleep, we suspect congestion of the brain, and follow the advice of Harris, by applying a leech at the angle or affected part of each jaw, or behind each ear. The infant should be placed in a warm bath, and a cap or napkin wetted with cold water, applied to the head while the infant is in the bath. If this be omitted, the bath may do as much harm as good. The cold drives the blood from the head, while the heat diffuses it to the rest of the body; and in this way the quantity in the brain is very much diminished. In such cases the bowels should be properly regulated. When there is fever, and it is accompanied by great thirst, a copious use of barley-water, cold water, milk and water, toast and water, should be given freely.

When there is inflammation of one or more points of the gums, leeches and incision are necessary. Van Swieten has given a very wise direction as to incision. It is not necessary, he says, to incise or cut the gum until it is evidently elevated by the tooth, and is hard, red, and painful; for if the tooth is deep in the gum, it cannot be forced to make its appearance by incision; this cicatrises, the cicatrix or scar is harder than the tissue of the gum, and will give more resistance to the advance of the tooth than the latter. The practitioner will, therefore, in such a case, compromise his reputation, if he hazard incision until the tooth is pressing on the upper part of the gum. I have known one case, says Van Swieten, in which the tooth did not appear for eight months after the incision (*Morbi Infantum*). It must be obvious that cutting the gum, while the tooth is undeveloped and is buried in the jaw, is a useless and injudicious practice; because the operation cannot possibly favour the growth of the tooth. Yet the operation is recommended by one of our eminent surgeons, on the grounds that a cicatrix being a new part is more readily absorbed than the gum. I agree, however, with those who entertain the opinion that incision ought not to be practised

* Bracelets and amulets for cutting the teeth, are gross impositions on the credulity of the public. I need scarcely state, they are perfectly useless.

unless the gum is swollen, hot, and painful, in consequence of the pressure of the tooth against it. In making the incision prematurely, the appearance of the tooth, so far from being accelerated, is retarded, on account of opening the capsule of the tooth before the latter is perfectly ossified. As to the practice of scarifying the whole gum from one side of the jaw to the other, when a single tooth is protruding, it is a disgrace to modern surgery. I have heard of such incisions having been made several times, when each tooth advanced, which showed, in my opinion, the grossest ignorance on the part of the operator. The cruelty, the barbarity of cutting the whole gum from one extremity to the other, whenever a tooth projects, deserves the strongest reprobation. The mode of incising the gum deserves attention. The head of the infant is to be held, while the operator opens the mouth and separates the jaws. He then introduces a bistoury, three-fourths of whose edge is covered with lint, and makes an incision parallel to the alveolar margin; and then, separating the jaws still more, he makes another incision transverse to the first. These incisions should be made down to the tooth—the gum ought to be completely divided, and no flap or bridle allowed to remain. This crucial incision discharges the congestion or inflammation of the gum, and removes the irritation caused by the pressure of the hard tooth on the irritated nerves of the gum which are subjected to it. This operation is by no means so painful as is generally imagined by mothers; indeed, I have repeatedly performed it, though the infants never cried during the operation. But in other instances they screamed loudly, and in a few seconds fell into a tranquil sleep, from which they awoke apparently in perfect health, even after they had been in convulsions, to the moment at which the incision was practised.

Some writers have lauded this operation in the most extravagant terms, as having miraculously saved the lives of numerous infants. Others cannot believe that it has ever saved the life of a single infant. Experience has convinced me of its importance when there is a cerebral congestion, convulsions, spasmodic cough and breathing, excessive diarrhoea, inflammation of the fauces or throat, and of the stomach and bowels (gastro-enteritis). When dentition is complicated with these diseases, and the gum is swollen and painful, an incision will be followed, in most cases, with decided advantage. I feel convinced that I have observed infants die for the want of it. I have never observed it followed by ulceration, gangrene, aphthæ, or stomatitis. The treatment of the sympathetic diseases, excited by dentition, such as those already mentioned, will be described in that of each of them.

It is also foreign to the object of these lectures to notice the whole pathology of den-

tition and the teeth at different periods of life, their irregularities, and the diseases caused by them; and for the same reason I omit dental surgery and hygiene. I cannot, however, but allude to my introduction of pure nitric acid as an application to caries in teeth of children and adults as a remedy which affords instantaneous relief of toothache, without causing any pain, provided it be used soon after the pain commences, and that the nerve of the tooth, the gum, and the alveolar process are free from inflammation or suppuration. It is much easier to apply it to the lower than to the upper teeth; and it should come in contact with every point of the caries to afford relief. This cannot always be accomplished when the upper teeth are affected, or in those cases in which the diseased part is on the side of the tooth and the next tooth in close contact with the affected one. The acid should be pure and carefully applied so as not to spatter on the mouth; and after its application, the mouth should be washed out with tepid water. In most cases, instantaneous relief is afforded; and the extraction of the tooth, which is a painful operation, rendered unnecessary. It is erroneously supposed that a tooth to which the acid is frequently applied decays very rapidly, but this is certainly not the fact. I have known several instances which prove the contrary. I have not known this remedy fail in a single instance of children or adults, when applied in a few hours after the commencement of the tooth-ache, that is to say before the nerve of the affected tooth has had time to become inflamed. It has frequently relieved patients whose cheeks were swollen and inflamed, when there was reason to suppose the nerve of the affected tooth was more or less inflamed. The acid excites severe pain in some cases, but these are rare exceptions.

Diseases of the Salivary Glands.—The salivary glands are very rarely diseased in newborn infants. M. Billard, whose observations were the most extensive, remarked but one case of ranula. The soft palate, its pillars, the amygdalæ or tonsils and the pharynx, in other words all the parts that compose the throat are liable to various vices of conformation and to congenital disease. I shall now consider these affections.

Vices of Conformation.—The vices of conformation of the velum palati or soft palate, consist in its division, more or less complete; or it may be too long, impeding dentition, and requiring excision. When the palate is divided, the infant cannot suck properly, and the milk or other food it takes, may in bad cases escape through the nostrils. In cases of adults, the operation of staphyloraphy proposed and first performed by Baron Roux, is resorted to in most cases with success. The pharynx or throat is too short in some infants, and impedes deglutition. When an infant cannot suck the breast milk, or that which it drinks, there is

either malformation of the pharynx or oesophagus, or inflammation. Of two hundred infants from one to ten days old, whose bodies M. Billard examined, he found the isthmus of the throat injected or inflamed in ninety. He also found that this state of the throat existed in infants of eight or ten days old, who had redness of the derm or skin. This proves an intimate relation between the skin and mucous membrane of the digestive tube.

The tonsils are occasionally congested in new-born infants, and in some cases covered with a layer of blood. These, and all other soft parts of the throat are occasionally inflamed. MM. Roche and Sanson have described these varieties as palatitis, pharyngitis, palatopharyngitis; but as each of the parts included under these terms, are rarely the exclusive seat of inflammation, which usually attacks all of them in succession, I shall describe them under the term Inflammation of the Throat, at our next meeting.

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DISEASES OF THE GENITO-URINARY ORGANS.

(Continued from p. 660.)

Symptoms.—Some time after sexual intercourse between a healthy man and a diseased woman (and the period varies), the symptoms of urethritis commence. These are a sensation of heat at the orifice of the urethra, extending more or less into the canal, and sometimes confined to the glandular portion alone. A titillation, more or less urgent, accompanied by a slight sensation of heat, an almost incessant desire to evacuate the bladder, an increase of venereal impulse, frequent and long-continued erections, more especially in the company of the other sex, or during sleep. Those symptoms are often accompanied or succeeded by unpleasant sensations in the testicles, spermatic cords, and groins, with a sense of fulness, weight, and tightness, in the inferior surface of the penis and perinæum. In the course of two or three days, the titillation is confined to the extremity of the penis, is soon converted into pain, which is more aggravated during the expulsion of the urine. The orifice of the urethra now becomes very sensitive and inflamed, its lips are reddened and tumefied, they are separated from each other, sometimes appear excoriated, and give passage to a small quantity of serous, limpid, whitish, yellowish, or greenish fluid, which stains the linen. The patient very soon experiences in the whole length of the canal, which becomes hard, and projectile externally, a tension accompanied by a disagreeable heat, and lancinating pains. The desire to pass urine becomes more and more urgent; but the contraction, and tumefaction of the mucous membrane causes such a

diminution of the canal, that the stream of urine is rendered very small, and rapidly diminishes. The jet of urine is frequently interrupted, curved, spattered, or bifurcated; and is so often solicited by the irritation or titillation at the neck of the bladder or about the anus, that it becomes so imperious, the patient is obliged to yield to it immediately. The urine in passing, causes a burning and painful sensation to which the French give the name of *chaude-pisse*. The pains are most vivid, at the moment the urine begins to pass; they diminish during its evacuation, and return with greater intensity while the last drops are being expelled. The frequency and durations of the erections are chiefly increased during the night, especially if the patient reposes on his back on a soft warm bed. The violent pains that they excite, disturb the sleep, and often oblige the patient to rise, and these pains render sexual congress very disagreeable, and sometimes impossible, while the emission of the semen produces such an intense degree of heat, that patients have compared it to the application of a red-hot iron. In some cases the erection or emission induces hæmorrhage; at this period the patient experiences in the whole length of the inferior part of the urethra, an unpleasant sensation, sometimes accompanied by a sense of weight and darting pains, which prevent him from walking, standing for any length of time, crossing his legs, or sitting. He is now affected with obstinate constipation, and a distressing tenesmus. The urethral discharge continues uninterruptedly, gradually increases, and becomes more or less copious. It consists at first of a thick whitish matter, which soon becomes yellowish, sometimes streaked with blood, or mixed with pure blood, and finally brownish or greenish; when it exhales a peculiar odour. This discharge stains the linen, yellowish, greenish, or greyish, the spots being paler at the circumference than at the centre, and not removable by friction after their desiccation.

After the inflammation has continued for twelve or fifteen days, it generally begins to decline, more or less, the dysury diminishes, as also the sensation of heat, caused by the passage of the urine and semen; the erections are less frequent and less painful; the discharge becomes thicker and more opaque; it is more viscid, gradually increases, and in a short time the disease generally terminates. The duration of the disease usually occupies a period of from two to seven weeks; but it may be protracted for a much longer period. It will be modified by the age and constitution of the patient, the condition of other organs, the regimen, the state of the urethra as regards former affections, and perhaps by atmospheric vicissitudes.

The symptoms vary in different cases; sometimes the discharge commences in a

few hours after sexual connexion, though in general it does not occur before the eighth or ninth and sometimes not before the thirtieth day. According to some writers, it has not appeared until after the sixth or eighth week; but such cases rarely, if ever occur.

When urethritis is not produced by internal causes, it commences in the anterior part of the urethra, and in most cases irritates the glans and prepuce; it is supposed to be confined to the fossa navicularis, beyond which we seldom discover traces of inflammation on dissection. The orifice of the canal is generally affected when the disease arises from contagion; but irritation of the neck of the bladder, disease of the prostate gland, or urinary calculus, will excite the same sensation in the extremity of the penis. Some writers maintain that the whole urethra may become inflamed, that the disease may advance along the entire of the mucous membrane, and sometimes into the bladder. The celebrated Swediaur was of this opinion; and it is important to know this fact in forming a prognosis, as the disease will be of much shorter duration, when confined to one point than if it occupies the whole canal. In some cases urethritis is so very slight, especially in those who have had the disease previously, that it excites very little inconvenience, and this is also the case when it arrives from mechanical causes or from leucorrhœa, but it is generally severe in young persons, who are affected for the first time. Each of the symptoms may vary in intensity, and some of them be entirely absent. The pain may be slight or severe, during the passage of the urine or semen, or it may present during the interval of the emissions, being sometimes characterized by a sense of weight and irritation, or even burning heat, in the external genitals and perinæum. These symptoms may commence before or after the appearance of the discharge; they are so violent in some cases as to cause total suppression of urine, they may continue severe, for several days, or during the whole course of the disease, though they cease in general after a few days' duration.

The discharge usually precedes, but sometimes succeeds, the pain; its quantity varies very much in some subjects; it may be sparing or very abundant; its qualities differ in individuals, and according to the stage of the disease. In general it is clear at first, thickening by degrees, then assumes the appearance of pus, then becomes yellow, green, and finally whitish with the consistence of cream, when it is viscid, transparent, and less abundant; it often remains always yellow, or towards its termination assumes a green colour; sometimes it is more or less brown, or streaked with blood.

Diagnosis.—Much contrariety of opinion exists, as to the diagnosis between non-contagious and contagious urethritis; but it is

generally held that the former is less painful, less durable, and produces less serious complications than the latter.

Another question of importance is, how long contagious urethritis is communicable. Sir A. Cooper has stated, that the disease may be communicated at the expiration of fourteen months subsequent to its apparent cessation. I have known the disease communicated, by a newly married man, at the lapse of eight months after he had been supposed to be cured by his medical attendant. Bell thinks that the disease ceases to be contagious so soon as the inflammation that caused it is dissipated; but that if this be renewed, the discharge becomes contagious.

Urethritis may be very much aggravated by errors of regimen, or of treatment, as the incautious use of exciting drinks, the application of cold to the penis, acrid astringent injections, the use of saline, or drastic purgatives, violent exercise, coition, &c. The effects of these causes will excite sympathetic derangement of the visceral organs, which will participate more or less in the irritation of the mucous membrane of the urethra, and in such cases the surface of the glans penis becomes tense, red, or livid, and acquires a degree of transparency, particularly about the meatus urinarius. It frequently is excoriated, extremely sensible, and furnishes a yellow foetid exhalation more or less copious; sometimes we observe ulceration, and when we press the surrounding integuments, a puriform matter escapes from a number of small points. The glans, as well as the rest of the penis, is swollen; but the latter often remains in an habitual state of semi-erection, the slightest touch or motion in walking excites in it the most severe pains. Many patients, however, do not present all these symptoms.

The tumefaction of the glans may be so great as to cause phymosis or paraphymosis; the first is often induced by inflammation, or œdema of the prepuce; this last symptom is often excited by walking, riding on horseback, or even sitting, when the penis remains pendant.

The pains of the penis generally extend to the groins, and often excite inflammation of the inguinal glands or buboes, which may be followed by suppuration; but in most cases this inflammation may be dissipated by resolution. Inflamed buboes are often caused by suppression of the urethral discharge.

In some subjects, the lymphatic vessels of the penis become inflamed, and form hard cords, extending to the root of the organ, or to the groins. In other cases there may be erysipelatous inflammation of the organ, which excites acute pain during erection, and the irritation is usually propagated along the vasa deferentia and other portions of the spermatic cord. In other instances the whole cord from the testicle to the groin is affected; but in the majority of cases certain portions

of it only are tumefied. Some patients suffer severely from an unpleasant sensation in the testicles; these glands frequently acquire such a degree of sensibility, that they cannot bear the slightest contact, without becoming inflamed. The primary inflammation does not always remain in the urethral mucous membrane. It extends to the subjacent parts, the submucous cellular tissue, and the reticular tissue, both of the urethra and corpora cavernosa, especially at the inferior part of the penis; in this state of things, the urethra cannot elongate itself in proportion to the distention of the body of the penis during erection; there results a curvature, or inclination of the organ to one side, which is usually called *chordee*. This morbid state excites the most severe pains, which generally deprive the patient of repose and sleep, and are sometimes accompanied by tenesmus, dysury, pains of the spermatic cords, groins, and loins.

On drawing the finger along the inferior surface of the urethra, from behind the scrotum to the extremity of the pubis, several tubercles about the size of a pin's head are perceived, which are produced by inflammation of the submucous cellular tissue.

The inflammation frequently propagates itself along the excretory ducts of Cowper's glands, and attacks the cellular tissue itself, where it surrounds them. There may be one or more circumscribed tumours, of greater or less size, in the part between the scrotum and anus, which cause the pain to be more or less acute. The pain is increased upon pressure and on passing the urine, the desire to do which is more frequent than ordinary. The discharge is commonly of a dirty green colour tinged with blood, and foetid. Sometimes it is suppressed, or there is dysury.

This inflammation sometimes attacks the prostate gland, and this complication of the disease is extremely dangerous, and will be described under the head proctitis.

In some subjects the irritation of the mucous membrane of the urethra is propagated to the bladder, ureters, and kidneys. The neck of the bladder is most commonly affected with inflammation, though the whole organ may be implicated. When the neck is inflamed there is a frequent desire to pass urine, accompanied by acute pain in the root of the penis, and sometimes about the perineum and anus. The body of the bladder becomes spasmodically contracted, overcomes the resistance of the fibres of the neck, and excites the most imperious desire to micturate, which obliges the patient to obey it the instant, in whatever situation he may be placed, without which it would pass involuntarily. At the same time the rapidity of the jet increases the pain, especially at the extremity of the glans. The urine is passed in small quantities, sometimes drop by drop, and finally there may be a total retention of it.

Urethritis in some subjects causes pains somewhat resembling rheumatism, in the fibrous tissues of the joints, muscles, or in their sheaths, or aponeuroses. These pains affect the thighs, hips, and abdominal muscles chiefly; but they sometimes become general. This symptom, though rare, ought nevertheless to be taken into consideration when we have muscular rheumatism and pains in the joints, which terminate spontaneously in inflammation of the urethra the suppression of which often gives rise to the like affections, and consequently there is in some individuals a manifest connexion between the two diseases.

Urethritis, and the secondary inflammation which it often gives rise to, may terminate either in resolution, suppuration, mortification, and may pass into a chronic state.

Resolution is the most ordinary mode of termination, although the disease may always run on, if no error of diet, no neglect of cleanliness, and no error of treatment, has arrested its natural course.

Its duration may be estimated according to the degree of inflammation, the constitution, and general health of the patient. In some persons it lasts only for three weeks, in others for six weeks, two, four, or six months or even more. According as urethritis disappears or diminishes slowly and gradually, or with a visible rapidity, and another organ becomes affected, it is said to have terminated by *delitescence* or metastasis. The testicle generally becomes inflamed, but sometimes also the conjunctiva, and a more or less acute ophthalmia results. On the other hand, though more rare, the pituitary membrane or the auditory canal becomes affected, and complete deafness is produced. The symptoms of irritation of the mouth, larynx, pharynx, and bronchiæ, are sometimes produced; and there may be a discharge from ulcers in these places, and almost always there are excrescences around the margin of the anus. In some subjects the articulations of the knee, and hips, the shin, and feet become the seat of chronic or dropsical swellings.

In other instances, the periosteum, and the tissue of the bone itself become inflamed, which gives rise to thickening of the former, to pains in the bones, to exostoses, and necrosis. The skin is sometimes covered with various eruptions, and the different organs present various morbid appearances; for example the brain and its membranes may be affected, and cephalalgia and mental derangement have been produced.

But all those complaints which succeed the delitescence of urethritis, are commonly owing to the direct action of some irritating cause upon the organ which was affected; these do not differ from what we observe in a perfectly healthy subject, because they are sometimes accompanied by a sudden suppression or a visible diminution of the inflammation of the

urethra; for it is a rare occurrence that it is entirely stopt by delitescence, unless the inflammation is very slight or on the point of disappearing spontaneously.

As to the discharge in urethritis, it is only the product of the diseased state of the mucous membrane, is sometimes mixed with pus, and produced by one or many ulcers on the surface of the canal, or sometimes by abscesses in the prostate or Cowper's glands.

The urethral, as well as all other mucous membranes, is, though rarely, the seat of ulcerations; but it has been ascertained by Mr. Hunter and many others, that the discharge in gonorrhœa—as was generally imagined in his day—is not produced by ulceration.

It is also well known to pathologists, that mucous membranes may become thickened or adherent to each other by inflammation, and that the canals which they line, may be partially or totally obliterated. They have also been the seat of adventitious bands, which may tend to the same result; hence urethritis is the exciting cause of stricture of the urethra.

In some cases the lymphatics of the penis suppurate, and form several small abscesses; but this is a rare occurrence, unless in the inguinal glands. The testicle and prostate may also become the seats of suppuration. The submucous tissue may be affected in like manner, and, in such cases, generally finds its way into the urethra, or externally. All collections of pus caused by urethritis may appear successively or simultaneously, and those situated near the neck of the bladder are often followed by urinary fistulæ.

Urethritis seldom terminates by gangrene, but there are examples recorded.

Reviews.

Outlines of Comparative Anatomy. By Robert E. Grant, M. D. &c. Professor of Comparative Anatomy in the University of London, &c. Part I. 8vo. London. pp. 144.

THE name of Dr. Grant attached to a work on Comparative Anatomy, is a sufficient guarantee of its excellence. The part before us contains an admirable survey of the osseous and ligamentous systems throughout the animal creation; the myology also commences, but is cut short by a solution of continuity extremely frequent in the books, or rather fragments of books, successively put forth in the present day, and which in us is wont to "wake emotions both of rage and fear," lest all literature should become periodical, and mar our occupation: we hate books in parts.

As a specimen of the work we extract the following account of the osteology of the upper extremity in birds.

"The scapular arch is very strong in birds, to form a solid resisting fulcrum for the powerful movements of the humerus; and the magnitude and strength of these bones corresponds in the different species with the power of flight, or the resistance they have to oppose to the pectoral muscles on the one side, and the brachial on the other. The scapulæ are long, curved, and compressed bones, extending along the back, on each side of the dorsal vertebræ; they become more narrow and rounded as they approach the glenoid cavity, where they suddenly expand to enlarge that cavity, and they are partially ankylosed at that place to the large and strong coracoid bones. The two coracoid bones extend from the articular cavity for the head of the humerus downwards and inwards, to rest their broad expanded base in a deep groove on each side of the anterior margin of the ento-sternal bone. These coracoid bones almost alone resist the approximation of the humeri on the median plane, and their descent in the direction of the pectoralis major on each side, and they have generally more than double the thickness and strength of the scapulæ. The two clavicles descend converging from the upper or humeral ends of the coracoid bones, and they are ankylosed together at their lower ends, where they commonly present a flat compressed prominence connected by cartilage, by tendinous expansions, or sometimes by ankylosis, with the anterior projecting point of the crest of the sternum. The clavicles are very thick and strong, and meet at an obtuse rounded angle in the most powerful of the rapacious birds, and are long, thin, and slender, and meet at an acute angle in the gallinaceous and other birds of feeble flight. In the ostrich the clavicles are very small and short, and disunited on the median plane, as in mammalia. In the arm of the bird there is a great development of the proximate bones, which by their magnitude and strength are best able to withstand the resistance to which they are so frequently opposed, while the more delicate and the more distant bones of the hand are few and less perfectly developed. The humerus has a broad, compressed, and curved head, the large articular surface of which plays freely in the shallow glenoid cavity formed by the scapular and coracoid bones. In the concavity at the back part of the head of the humerus, are the large apertures by which the air from the axillary cells gains admission into the capacious interior cavity of this bone. The distal extremity of the humerus, is curved forwards, and presents a broad articular surface with a double condyle, on which chiefly rotates the large ulna, the radius being a more slender bone. The radius and the ulna are so articulated as to resist pronation and

supination of the hand, these motions being partially admitted at the head of the humerus. The arm of the bird is fixed in a state of pronation, the position best suited to strike the air with effect, and the hand moves upon the arm, not in the common mode of flexion and extension, but by abduction and adduction. At the extremity of the radius and the ulna, there are two carpal bones, which are succeeded by a single long metacarpal bone composed of three pieces ankylosed together. One of these pieces on the radial side of the hand is very short, and supports the single small phalanx of the radial or fore finger. the middle meta-carpal piece is by much the largest, and supports at its extremity generally three phalanges of the middle finger, the last of which is very short and slender. The first phalanx of the middle finger has a flat compressed form, like the meta-carpal bone. At the ulnar side of the distal termination of the meta-carpal bone is a small single phalanx of the outer or little finger, which is more immediately connected with the exterior slender portion of the meta-carpal bone. When in a state of rest, the hand of the bird is folded along the exterior edge of the ulna, and the large primary feathers are thus extended along the sides of the trunk to the tail. These fingers appear to be the analogous of the three middle fingers of the human hand, and there is sometimes a single phalanx covered with a spur on the radial side of these three fingers of the hand of the bird."

We beg to recommend Dr. Grant's outlines to all who take an interest in comparative anatomy, that is, to all who understand what is the true basis of physiology, and the real source from which nearly all that is certain and permanent in this science is derived.

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OUR HOSPITALS AND HOSPITAL SURGEONS.

To the Editor of the London Medical and Surgical Journal.

SIR—The opinions of not only continental medical men, but of those nearer home, have been freely expressed of our hospitals and hospital surgeons, but in vain, as they still remain dead to the voice of truth and fair fame, by sacrificing science, and forgetting an awful futurity in the adoration of their favoured deity, Plutus.

There is nothing sound in the present constitution of their body, into which new life can be infused—all is rotten, mentally as well as bodily. This system they have had the effrontery to declare the only one calculated to make the profession respectable. The joy that swells the human heart under the prospect of diminishing the miseries of this life,

by the extension of judicious medical aid to the remotest habitation of the species, they have never felt. The king and the peasant are subject to the same infirmities, therefore the same laws, religion, and medical aid, should, if possible, extend their beneficent influence over all. The obstinate opposition on the side of these corporate bodies to all plans likely to open our hospitals to the gratuitous education of the diligent and humble student, sufficiently establishes their aversion to give efficiency to these philanthropic ideas. They have done their utmost to render our hospitals like the immense resources charitably appropriated to education, the heir-looms of the wealthy instead of being devoted to the poor. In a late number of your valuable journal, you speak of picking pockets, but in no age or country has this system been carried to the extent it has arrived at in this metropolis, as the hospital adepts in this line have neither blushed, nor denied their crime. They stand flagrante delicto with the maner in their possession, and nothing more is wanted but their committal. Their offences will not admit of bail, therefore suffer they must; and there can be no hesitation in averring, that when they be sifted under your cross-examination, their crimes against science, genius, and humanity, will place their vices in a higher range of culpability in the eye of an all-searching providence, than many who have expiated their offences against the law, in that classical, that pastoral, and suspending vicinity, where some of the most eminent of these hardened and offensive sinners still continue to carry on their trade of iniquity. In the construction of the edifice about to be erected for the management of the medical affairs of this great empire, those who have committed so many unbecoming and high misdemeanours must be debarred from interfering when the work of reformation shall be decidedly entered on—they must be removed to a respectable distance, and duly ticketed, so that they may be known. In order to expiate their former misdeeds, they must be compelled to betake themselves to sackcloth and ashes, and signify their readiness to supplicate an entrance, even by the back door. Some step of this kind is absolutely necessary, otherwise the wise efforts of the legislature will be defeated by these unrelenting adherents to his satanic majesty.

These hospital surgeons are now doing their utmost to decry the operation of lithotomy, which is one of the greatest improvements in modern mechanism and science, when judiciously and honestly applied in the early stages of calculus. It will obviate the tragical events which in too many instances have disfigured the hospital practice of this metropolis, in which patients have often been cut for the stone, where no stone existed in the bladder. To such murderous proceedings lithotomy must ever remain a stranger. These events never could have happened, where diligence and skill

were the attributes of the operator : but carelessness and an anxiety for display were the causes of these dismal catastrophes, which we have been informed have taken place more than once in the practice of the same operator. Such an individual, on the supposition of his having any brains, should have taken an early opportunity of blowing them out. The awkward hospital operators, under events of this untoward nature, invariably shelter themselves under the name of Chesselden ; but the very circumstance of his having committed so gross a mistake, instead of being an apology, is an aggravation of their misdeeds. Chesselden erected a beacon on which no man entitled to the name of a surgeon ought afterwards to have stranded himself. It is to be hoped that you will lay before us the names of the cutters for the stone in the single and duplex ratio, as they will be found to greatly outnumber the dry tappers, with which these men of science amuse themselves. To cultivate the understanding, has great influence in correcting the vices of the heart, and thereby inspiring generous deeds ; but if these diploma and certificate-mongers—these Christian Jews—are examined by this rule, we shall be compelled not only to adopt, but to inculcate an unfavourable opinion of the feelings of their hearts, as well as the faculties of their minds, as far as the discharge of their corporate and public duties are concerned.

I have the honour to be, Sir,

Your humble servant,

CÆLUS SECUNDUS.

June 10th, 1835.

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DR. BAIRD'S CLAIM AS THE FIRST NON-CONTAGIONIST.

To the Editor of the London Medical and Surgical Journal.

SIR—In the leading article of the last number but one of the London Medical and Surgical Journal edited by you, I noticed your statement, claiming the credit for being the first to pronounce on the *non-contagion* of cholera. Very probably, you only meant this in an *editorial sense* : if so, I should think your claim is just ; for you are, I believe, the very first journalist who nobly stepped forward to expose, in a decided manner, the erroneous and pernicious views, thus so prevalent, of cholera being contagious in its nature.

However, with all due deference to your claim so far, founded as it was too on a zealous love of truth, justice, and science, I consider that Dr. Baird has a *priority* of claim in every other point of view, not only over yourself, but over every physician in London, on the following grounds :—

Having waited on that gentleman immediately after my arrival in London from Dantzick, in the middle of November, 1831,

just as the panic had begun to spread, it was, I beg to assure you, no small consolation to me to find that a physician of his distinguished perspicuity, enlightened views, and vast experience in disease, more especially in endemics and epidemics, had *fully decided* that the cholera was in *nowise* contagious. With his characteristic integrity and quickness, I well remember that he also condemned the absurd, yet pernicious views then begun to be so generally entertained of the epidemic, as well as the illiberal spirit which had betrayed itself in promoting such views, and spreading the consequent panic throughout the united kingdom. This, to say the least of it, now that time and facts have verified the opposite views, was certainly sinning against social life, which calls for deprecation, otherwise every liberal mind cannot but reprobate it.

Long, therefore, before the first appearance of your able and liberal journal in the beginning of February, 1832, or before the appearance of Dr. Gilchrist's talented and spirited letters in the *Times*, exposing the false views of the alleged contagion of cholera, as founded not on ungrounded assumptions and fabricated facts alone, but rather on some abominable policy, Dr. Baird *had decidedly* promoted and maintained the correct views, now verified by time, of the *non-contagion* of that disease, not only to myself and the profession, but *according to what I heard at large*, to the high and extensive circle in which he moves. In fact, he was, I verily believe, the *very first* physician in London ; at any rate, he was the *very first I met with after my arrival in town* from Dantzick, who had arrived at the conclusion, that cholera was *not at all contagious*.

I further know that, throughout the period of the epidemic in this country, he continued to pronounce, and occasionally to give in able anonymous communications, facts shewing the fallacy of that doctrine, which time at length has so providentially upset. Having visited numerous miserable objects of the disease in their wretched abodes, consoled, and every way relieved them, he was reasonably entitled to proclaim, in the decided manner he did, the *non-contagion* of cholera. In short, medical science and the profession, both, must always remain largely indebted to Dr. Baird, not only for the able and decided part he acted throughout the late epidemic cholera, but for the kind and liberal support which he afforded to several conscientious and scientific observers of that epidemic, and to none more than for that afforded in the hour of need.

Sir, your most obedient humble servant,

JOHN HAMETT, M.D. F.R.S.

One of the late Medical Commission in the North of Europe, &c. &c.

Birmingham, June 20, 1835.

[In reply to the preceding observations, we beg to state that we urged our claim in an

editorial as well as a professional sense. We were not aware, nor are we at this moment of any publication of Dr. Baird's, avowing this advocacy of non-contagion before February 1832, when we attacked the opposite doctrine in this Journal and in the different medical societies. We certainly stood alone at the time, and did not know so high an authority as Dr. Baird was in our favour. We need scarcely remind Dr. Hamett, that anonymous publications, when the Contagion Boards were in their glory, were of no avail whatever. If he will look to the *Lancet* of that period, he will see a violent attack on the editor of this Journal, in which he is singled out as the only advocate of non-contagion, and as such, designated an enemy to the whole profession, whose harvest he proposed to destroy. He shall be most happy to insert any communication intended to prove the priority of Dr. Baird's claim to his own.]—ED.

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BAD EFFECTS OF PREMATURE EDUCATION—EVILS OF THE RACE OF INTELLECT—A HINT TO LORD BROUGHAM.

THERE cannot be a second opinion among well educated medical practitioners, that attempting to teach a child of three or four years old, by book learning, is highly injurious to the brain, mind, and body. It is the fertile source of fatal water in the head, of great injury to the whole constitution, to the development of the intellectual faculties and corporeal powers, and the preventive of a sound mind in a sound body.

When a child, of the age mentioned, is confined for several hours, every day, in a sitting posture, it is deprived of that motion and exercise which circulates the blood throughout the body, develops every part, establishes health, and lays the foundation of a sound mind in a sound body, of good sense, and of happiness in after life. Physicians, as well as some few of those who do not belong to our profession, but who possess powerful minds, are of this opinion. Thus Mr. Cobbett makes the following remarks, which would do honour to any member of the faculty.

“ ‘*Hedekashun*’—*Education*.—I have always held the opinion—an opinion originating in that of a very sensible father—that early teaching of book-learning had a tendency to enfeeble, if not to destroy the mind. I am sure that I owe my astonishing capacity to labour mentally, to the circumstance of my not having known at all of books, worthy of being called knowledge, until I was fourteen years of age. In divers parts of my writings I have strongly urged parents to abstain from attempting to make their children little prodigies of learning; and to no one of seven children have I ever given, or caused to be given, a copy to write from, or a lesson in

reading. The females are as learned as any women need be; and the three eldest sons may fairly and justly be called scholars; and my real opinion is, that if I had pursued the course which parents in general would have pursued with regard to these children, they would have been persons of a character and description very different from that which they are now. In my English Grammar, I tell the son to whom I addressed it, and who was then about 14 years of age, that, up to that time, he had not been requested even to look into a book; that his elder brothers learned to write of themselves from seeing me write; that he had learned to write from seeing them write; that I had done my best to give him the greatest blessing described by Lord Bacon, ‘a sound mind in a sound body;’ that he had them both; but that it was now time, as I did not intend him to live by bodily labour, for him to begin to be a scholar, and to learn things which it was unnecessary for labourers to know any thing about; but that, at the same time, however book-learned he might become himself, he ought to take care never to consider, and particularly never to call, labourers ‘ignorant men;’ seeing that they would always have a sort of knowledge, and ability, which he would never possess. Grammar, I told him, and grammar of his own language, was the only foundation of all book-learning; and that, as I was going to write an English Grammar, he ought to copy it word for word, and letter for letter as I proceeded. This he did; and in his hand-writing it went to press, while I was in Long Island.

“ Do we see young birds flock together, or young any things? No—we see them mix with the old ones, and thus learn their manners, and their modes of getting their living. Can a child who converses with nothing but children learn to be a man? If a hundred children were brought up till they were twenty years of age, to see nobody but one another, it would be a mass of half idiocy altogether; and we should see all the lords and baronets and ‘squires little better than idiots, if they did not set at nought the commands of their schoolmasters and parents, which, very fortunately for themselves, they generally do; and hence they become, generally speaking, men of sounder sense, and infinitely more pleasant persons to come in contact with, than the intolerable wretches who spend their time in poring over books, and who become what are called literary men, who are the pests of the community; and to knock whom on the head, if it could be made conformable with the peace of society, a mallet ought to be kept in every parish church, to be used by the churchwardens and overseers, and which would very seldom endanger the parson himself, he generally understanding shooting and hunting a great deal better than any thing else; and miserable is it for any parish where the parson is a

pedant, and a sort of bastard lawyer, with Burn's Justice everlastingly in his hands, wherewith to disturb the peace, to the everlasting torment and curse of the people."

Mr. Cobbett made these remarks before introducing the opinions of an American physician, which we are about to notice: and our recorded opinions are similar to his, though we delivered them to our students. It would, if Lord Brougham and other advocates of Sunday Infant Schools, as part of premature education, would peruse and reflect on the following opinions on the subject, from which no well-educated medical practitioner can possibly dissent.

Consequences which have resulted from inattention to the connexion between mind and body. The best minds not produced by early mental culture. By Dr. Brigham of Connecticut.

"I beseech parents, therefore, to pause before they attempt to make prodigies of their own children. Though they may not destroy them by the measures they adopt to effect this purpose, yet they will surely enfeeble their bodies, and greatly dispose them to nervous affections. Early mental excitement will serve only to bring forth beautiful, but premature flowers which are destined soon to wither away, without producing fruit.

"Let parents not lament because their children do not exhibit uncommon powers of mind in early life, or because, compared with some other children, they are deficient in knowledge derived from books. Let them rather rejoice if their children reach the age of six or seven, with well-formed bodies, good health, and no vicious tendencies, though they be at the same time ignorant of every letter in the alphabet. If they are in this condition, it is not to be inferred that their minds are inferior to those of children who have been constantly instructed. It is a great mistake to suppose that children acquire no knowledge while engaged in voluntary play and amusements.

"They thus do acquire knowledge as important as is ever acquired at school, and acquire it with equal rapidity. Many think that the child who has spent the day in constructing his little dam, and his little mill, in the brook, or the stream that runs in the gutter; or in rearing his house of clods, of snow, or in making himself a sledge or cart, has been but idle, and deserves censure for a waste of his time, and a failure to learn any thing. But this is a great error of judgment; for, while he has thus followed the dictates of nature, both his mind and body have been active and thereby improved. To him, any thing which he sees, and hears, and feels, is new, and nature teaches him to examine the causes of his various sensations, and of the phenomena which he witnesses. For him the book of nature is the best book, and if he is permitted to go forth among the

wonders of creation, he will gather instruction by the eye, the ear, and all his senses.

"He is, for a while, just as ignorant that stones are hard, that snow will melt, that ice is cold, that a fall from a tree will hurt him, and a thousand other common facts, as he is of a 'parallelogram,' or the 'diameter of the sun,' or the 'pericarpium of flowers,' or of many other similar things, which some think important for infants to know*. If his time is constantly occupied in learning the last, he will grow up ignorant of many common truths, and fail in the best of all learning—common sense.

"The child, when left to himself, manifests a true philosophical spirit of inquiry. The story related of the celebrated Schiller, who, when a boy, was found in a tree, during a thunder storm, trying to find where the thunder and lightning came from, is an instance of the natural tendency of every child to self-education. This tendency is highly important to encourage, for it involves the cultivation of that spirit of inquiry, 'which is far more valuable than limited acquirements in knowledge; a spirit which teaches us to distinguish what is just in itself, from what is merely accredited by illustrious names; to adopt a truth which no one has sanctioned, and to reject an error of which all approve, with the same calmness as if no judgment were opposed to our own.'† But this spirit will never be acquired, when the child is taught from his infancy to depend upon others for all he knows, to learn all he does learn as a task, and not from the desire of ascertaining the truth, and gratifying his curiosity.

"Let not the parent, therefore, regret that his child has passed his early years out of school; for in all probability the knowledge he has gained while running and exercising in the open air at play, is more valuable than any he would have gained at school. At all events, he has gained what is far, very far more valuable than any mental acquirements which a child may make, viz. a sound body, well developed organs, senses that have all been perfected by exercise, and stamina which will enable him in future life to study or labour with energy and without injury.

"The remarks which I have made, relative to the danger of too early exerting and developing the minds of children, are not made without some knowledge of the education of children in various parts of our country.

"That children do have their mental powers prematurely tasked, is a fact which I know from personal observation. I have seen a course like the following pursued in many families in various parts of the country, and I know that this course is approved of by many excellent persons. Children of both sexes are required, or induced, to commit to memory many verses, texts of Scripture,

* See Infant School Manual.

† Brown's Philosophy.

stories, &c. before they are three years of age. They commence attending school for six hours each day, before the age of four, and often before the age of three; where they are instructed during three years in reading, geography, astronomy, history, arithmetic, geometry, chemistry, botany, natural history, &c. &c. They also commit to memory, while at school, many hymns, portions of the Scriptures, catechisms, &c. During the same period, they attend every Sunday a Sabbath school, and there recite long lessons; some are required to attend upon divine service at the church twice each Sunday, and to give some account of the sermon. In addition to these labours, many children have numerous books, journals, or magazines to read, which are designed for youth. I have known some required to give strict attention to the chapter read in the morning, and to give an account of it; and have been astonished and alarmed at the wonderful power of memory exhibited on such occasions by children when but five or six years of age. I have known other children, in addition to most of the other performances, induced to learn additional hymns, chapters of Scripture, or to read certain books, by the promise of presents from their parents or friends.

"The foregoing account fails to describe the amount of mental labour required of many children in intelligent and respectable families.

"The injurious and sometimes fatal effects of such treatment have been already mentioned. But I cannot forbear again to state that I have myself seen many children who were supposed to possess almost miraculous mental powers, experiencing these effects and sinking under them. Some of them died early, when but six or eight years of age, but manifested, to the last, a maturity of understanding which only increased the agony of separation. Their minds, like some of the fairest flowers, were 'no sooner blown than blasted.' Others have grown up to manhood, but with feeble bodies and disordered nervous system which subjects them to hypochondriasis, dyspepsia, and all the Protean forms of nervous disease. Their minds, in some cases, remained active, but their earthly tenements were frail indeed. Others of the class of early prodigies, and I believe the most numerous portion, exhibit in manhood but small mental powers, and are the mere passive instruments of those who in early life were accounted far their inferiors. Of this fact I am assured, not only by the authority of books, and my own observation, but by the testimony of several celebrated teachers of youth.

"The history of the most distinguished men will, I believe, lead us to the conclusion, that early mental culture is not necessary, in order to produce the highest powers of mind. There is scarcely an instance of a great man, one who has accomplished great results, and

has obtained the gratitude of mankind, who in early life received an education in reference to the wonderful labours which he afterwards performed. The greatest philosophers, warriors, and poets, those men who have stamped their own characters upon the age in which they lived, or who, as Cousin says, have been the 'true representatives of the spirit and ideas of their time,' have received no better education when young, than their associates who were never known beyond the neighbourhood. In general their education was but small in early life. Self-education, in after life, made them great, so far as education had any effect. For their elevation they were indebted to no early hot-house culture, but, like the towering oak, they grew up amidst the storm and the tempest raging around. Parents, nurses, and early acquaintances, to be sure, relate many anecdotes of the childhood of distinguished men, and they are published and credited. But when the truth is known, it is ascertained that many, like Isaac Newton, who, according to his own statement, was 'inattentive to study, and ranked very low in the school, until the age of twelve;' or like Napoleon, who is described, by those who knew him intimately when a child, as 'having good health, and in other respects was like other boys,'* do not owe their greatness to any early mental application or discipline. On the contrary it often appears, that those who are kept from school by ill-health or some other cause in early life, and left to follow their own inclination as respects study, manifest in after life powers of mind which make them the admiration of the world."

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The London Medical

AND

Surgical Journal.

Saturday, June 27th, 1835.

PURE SURGERY—ODD SUPPOSITIONS.

WHATEVER absurd people may choose to say against the mode in which surgeons are elected to our metropolitan hospitals, it is clear that these eminent functionaries possess a degree of professional skill approaching to infallibility, and never by any chance are guilty of the gross blunders, which occasionally entail loss of reputation and payment

* *Memoirs of the Duchess of Abrantes.* This lady says, "My uncles have a thousand times assured me that Napoleon in his boyhood had none of that singularity of character attributed to him."

of damages on the hybrid practitioner who wields the scalpel with one hand and the pestle with the other. How would the public be astonished if they were to hear of such a case as the following!

A young woman is bled by the assistant of a general practitioner, and is thereafter incommoded by a tumour at the bend of the arm. She applies for relief at a large metropolitan hospital, and one of the surgeons, conceiving the tumour to be a false aneurism, arising from a puncture of the brachial artery, assures the patient that the evil has resulted from the venesection, and is remediable only by an operation: this is consented to, and after a very tedious piece of work the vessel is *said* to be secured.

The patient, on the strength of what she has heard, institutes a legal process against the aforesaid general practitioner for the injury she has sustained, through the ignorance or clumsiness of his assistant. The general practitioner has recourse to a gentleman who deservedly stands very high as a surgical authority, and the latter, on investigating the case, declares positively *that the brachial artery was not punctured by the phlebotomist, and was not secured by the hospital surgeon!!!* The affair is hushed up, and the costs incurred by the defendant are paid by the operator. Some queer fish of a correspondent has sent us this catenation of preposterous suppositions, and asks with great gravity whether any such transaction has actually occurred since the year 1800.

Gramercy! what is the man dreaming about? Why, look you, the operator is by hypothesis a *pure* and an *hospital surgeon*, and on this account we should be inclined to regard the thing as simply impossible—but really we don't know—can any body tell us?

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EARLY PRACTITIONERS OF MEDICINE —AN INGENIOUS PARALLEL.

WHEN we consider the various sources from which the art of medicine has been derived, we cease to wonder at the numerous distinctions of cast, as well as of opinion among practitioners.

In times of old we find medicine invented and practised by gods, by monarchs, by priests, by slaves, and by birds and beasts. Antitypes of these may perhaps be discovered among us in the present day.

In old Greece, some of the divinities were in large practice, particularly Apollo, of whom we ourselves are evidently entitled to be considered as the recent analogue, for having killed the python of medical corruption with the shafts of our wit: it should seem that the artist who produced the statue of the *Apollo Sauroctonus** recognised our affinity to him of the silver bow, and had a prospective allusion to our dealings with the *green lizard*.

Monarchs, especially in the East, have been greatly addicted to physic. Mithridates is well known to have had such a turn for pharmacy, that he discovered an antidote against all poisons; had he lived in the present day he would no doubt have used prussic acid as a *liqueur*. The class of royal practitioners seems nearly extinct—its only remaining representative is King Harrison, who has much more to do with medicine than he ought. To the priests we are greatly indebted—to those of Asia and Egypt, as, perhaps, the earliest cultivators of the art, and to those of Modern Europe, as the depositories of medical, and all other kinds of lore, during the dark ages; the descendants of the latter are extant in Pall Mall, where the *monkish system* is still preserved in great purity, as evinced by a mortal abhorrence of surgery, to say nothing of a mortal ignorance of it.

* *Σαυρος* a lizard and *Κρίνω* I slay.

In ancient Rome, medicine was chiefly practised by slaves—their posterity are Halford's *toadies*, and those persons throughout the profession, whom we cannot inspirit into a due resistance of the oligarchs.

Beastly medicine took its origin in Egypt. We learn from Strabo, and other ancient writers, that the Hippopotamus, when oppressed with plethora, was wont to phlebotomize himself with the sharp points of Nilotic reeds, and thus taught men the use of blood-letting; some other useful hints were also communicated by the sacred bird—the Ibis. Viewing the matter generally, we should say that the beastliness of the *modern* profession was obvious *partout*; with regard to birds we do not know of anything precisely analogous—there is, however, a species of “ferocious wild fowl” called bats, that offer a sort of approximation, though Heaven knows, they do anything but teach men medicine!

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Foreign Medicine.

Historical Passages in the Homœopathic Doctrine.

It was in the year 1796, and in Hufeland's *Journal der Praktischen Heilkunde*, vol. 2, p. 391, that Hahnemann first emitted his ideas on the system of treatment founded on this doctrine. Of it and the ground on which it stood, Sprengel at that time spoke in the following terms: “Samuel Hahnemann endeavoured to renew the ideas of the ancient methodic sect, regarding the changes of the body, by shewing, *by a strict induction*, that the majority of powerful medicines, known by the name of specifics, are only useful because they produce an artificial excitement that develops phenomena very much resembling those of the disease itself. In fact, his theory is *perfectly confirmed* by the daily observation of the counter-excitations produced by art, and by which the morbid irritation is destroyed.”

It is difficult to pronounce upon this sort of approbation accorded by the learned author of the *Essay of Pragmatic History of Medicine*, to this renovated doctrine of the Greeks; and it would be interesting to know whether he maintained that opinion to his death. It certainly leads us to think that the judgment of Kurt Sprengel did not equal his profound erudition.

Hahnemann appears to have always thirsted after notoriety. In 1792, he published a popular medical journal at Frankfurt-on-the-Maine, entitled “The Friend of Health.” It was at this time that he denounced the physicians of Leopold II. to the whole of Europe, as having slaughtered the prince by their treatment of his last illness. In 1800, the patriarch of Doethen boasted that he had discovered a remedy against scarlet fever, but he would not disclose it. (*Talzbürger Medicinische Zeitung*, 1800, vols. 1 and 2). No doubt it was belladonna. Every one knows what boast he made of his soluble mercury. The first French thesis in which mention was made of the homœopathic system is that of Doctor Theodore Bockel, published at Strasburg in 1826.

Lithotomy and Lithotrity.

A discussion founded on the report of M. Velpeau, touching a rumour on the latter of these subjects, has lately occupied the Académie de Médecine for several successive sittings. The learned reporter took this opportunity of expressing his decided opinion that the dangers of lithotomy have been much exaggerated, while on the other hand the harmless nature of lithotrity has been far too much credited. The report and opinion urged with all the eloquence and backed by the accumulation of statistical tables, which no one knows better than M. Velpeau how to employ and collect, gave rise to much acrimony of language in the speakers on both sides, and afforded considerable interest, and occasionally, amusement to the Academy at large. The principal speakers in favour of lithotomy were, M.M. Velpeau, Roux, Larrey, Sanson, Souberbrielle, Lepelletier de Mans, and Breschet. On the other side were ranged MM. Amussat, Lisfranc, Labat, and Segalas. The Academy, however, testified its sense of the question in distinctly receiving the report of M. Velpeau.

In the course of the discussion M. Lisfranc informed the Academy, that M. Du Bois and himself had undergone personally the operation of lithotrity several times.

Case of sudden and repeated suspension of Cerebral Action.

G. B. formerly a soldier, aged 53 years, of a lymphatic temperament, enjoyed good health up to last year. Being obliged five years ago to give up his calling of tailor, in consequence of the failure of his eyesight, he became foreman of tile-makers. This new calling exposed him considerably to inclemencies of weather, and caused him to take several catarrhs that were treated antiphlogistically.

On the 30th March, 1834, being four leagues from home, he set out on foot to reach it: when half way he lost all sense, and fell

down. In this state he remained for three or four minutes; his companions picked him up, and he continued on his way. In the course of the whole journey he had twenty attacks exactly resembling the first, only that instead of falling he was kept up by his companions. He always fell on the right side, and was not convulsed either in the limbs or face. Arrived at home, he ate a very slight supper, went to bed and felt no consequences from what had happened. Seventeen days passed without any attack, and he returned to his work. On the eighteenth day he had a similar attack to the first one: during the day he had several, but this time there was sufficient warning given to allow him to sit down on the ground, and some sense remained. Without the precaution of sitting down, however, they would certainly have thrown him down. He consulted a medical man, who bled twice largely in twenty-four hours.

A week passed without any attack; on the ninth they were more frequent than before. During the attacks the man was giddy and had drumming in the ears. He was again bled twice. The day after he complained of great pains of the belly, and had several large motions, in which a great quantity of worms was observed. Two days afterwards he had an emetic and a purgative; under the influence of those, the attacks became still more frequent, amounting to fifty or sixty in the day. At this period another medical man was consulted, who gives the following as the state in which he found the patient.

The pulse beat twenty-four in the minute; the skin was something warmer than usual; the tongue slightly red at the point and edges: pressure caused a little pain at the epigastrium; the belly was something distended with flatus. Percussion shewed the chest to be clear all over, except the cardiac region and a little above the right breast, where there was a tumour of the form and size of a small hen's egg. The stethoscope applied over this part gave a bruit similar to that produced by the heart's beating. At first an aneurism was suspected, but the patient said he had had the tumour from infancy, and it had never increased nor diminished. During the examination of the patient he had several attacks; his face became red, the beatings of the heart were accelerated; he complained of seeing objects quintuple or sextuple, and of some heat at the stomach; in a minute all the symptoms disappeared.

The first attempt made was to subdue the gastro-enteritis, by the application of leeches to the stomach and belly, by poultices, demulcent glysters, and dieting. By this means the pain of the stomach vanished, the belly became pliable, and the tongue recovered its natural colour. Notwithstanding, the attacks were not diminished. Antispasmodics were of no use whatever; neither blisters to the legs, sinapisms to the feet, nor irritating

glysters procuring any relief from the attacks. A large blister was applied to the nape of the neck; two days after, the attacks were visibly diminished, after and in consequence of which, a seton in the same place was substituted, since which time the patient has been progressively getting better. At the present time (March 1835), he can walk quietly, and is about to commence work.—*Journal de Medecine pratique de Bordeaux.*

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OBSERVATIONS ON QUARANTINE LAWS. BY SCRUTATOR.

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As it is not improbable that Cholera may again appear in this country, and as bowel complaints are now rather prevalent, a few observations on quarantine laws may be allowed; inasmuch as they will open the eyes of the profession to the shocking consequences of such enactments. It is right to premise, that such laws are nearly abolished in all countries except our own; and they would have been erased long since from the statute book, had the College of Physicians kept pace with the progress of science. The quarantine laws in thousands of instances have excited suspicion, and, as it were, generated contagion where it never existed; as these laws can find infection or contagion in every quarter suited to deceptive purposes. The Dutch have no quarantine laws, and they are not more the subjects of contagious diseases than those who, to their sorrow, are so amply and expensively provided with them. This phlegmatic people regulate affairs of the nature in question on the spur of the moment, and they, therefore, do not keep a body of men in pay whose interest it is to excite unnecessary alarm. The abolition—or at least a modification—of the quarantine laws would do more to annihilate ideal contagion, which is a source of the greatest mischief to the commerce of Great Britain, than any other measure I know of*. The doctrines of contagion are supported by selfishness, ignorance, and tyranny, on the Continent; and as these are on the decline, there can be no doubt that the present extravagant opinions on the subject will yield to the light of reason and just inquiry. The expense of maintaining the quarantine laws of this country is great, and, consequently, many are interested in upholding them. The more we study the law of animal life, and the causes influencing it in health and disease, the more shall we be on our guard against adopting contagion as the cause of epidemical diseases, however fatal these may be in their results. When epidemical maladies assume a fatal tendency, the imbecile, the ignorant, and

* Such laws were the offspring of the dark ages.

those interested in deception, invariably, but unjustly, trace their origin to contagion.

In short, to be plain, all the "reflecting men," as I have good authority to aver, believed that there existed on the side of contagionists, *an inclination to prove too much*, a species of evidence which every one knows how to appreciate. Sir ——— had long erroneously confounded epidemical with contagious diseases; and, therefore, while he continued to regulate the Board of Health, there never could be any lack of such cases, either in existence, or ready to be adduced, when circumstances rendered their development favourable. He was regarded, while I was at Gibraltar and in the Mediterranean, as *CONTAGION personified**; and the extension of this principle, by every means in his power, constituted his beau ideal. From frequent intercourse with those who have studied the malady called Cholera in this country, in Prussia, and Russia, and in France, I have no hesitation in avowing, that there was a great deal more made of the disease on the continent, France excepted, than truth will bear out, and the Boards of Health of this country seemed to have been exceedingly willing to enlist themselves in the cause, and under the ominous banner of "contagion." The deaths were invariably over-rated, as many of those events were classed with cholera which originated in a very different cause, or were the product of the means of prevention, or of disease long in existence, or of poverty and wretchedness.

By way of illustration, I shall for one moment quit physic for law, and state the case thus:—Contagion was plaintiff, and defendant was Common Sense. Plaintiff sought the right of establishing quarantine laws, boards of health, &c. &c., to ensure the payment of certain sums annually to those of his friends who supported his pretensions. This claim was opposed by the defendant on the grounds of humanity, the commercial interests of the country, and as hostile to the cause of truth, justice, and honour; and thereupon issue was joined: but ere the case was decided, we ought to reflect upon it, since, doubt not, if a wrong judgment be awarded, there will be a rule moved for, to show cause why a new trial should not be granted.

We may rest assured such was the result, that hunger, want of clothing, and a broken spirit, doomed to linger out its flickering spark of vitality in a noxious den of wretchedness, wait not for an easterly wind ere they attack their victims; and which, where such evils are suffered to exist, no quarantine laws will preserve. Such evils, it is true, engender

the most formidable diseases; but no honest object can be attained by attributing them to contagion.

Such men as Young, Johnson, Foote, Ryan, Searle, and the faculty of Paris, ought to have had an opportunity of examining this disease minutely, and of reporting thereon; since their experience cannot be overturned by all the verbiage of all the contagionists in the universe. Yet, the temerity with which many of the *dictionnaire* advanced their opinions as to the cause of a disease, of the nature of which they were, as far as personal observation was concerned, entirely ignorant, was no less impudent than disgusting.

It is now admitted in France, Russia, and Austria, that quarantine restrictions were useless. Proceedings therefore, in the way of precaution in this country, which in their very essence are calculated to beget evils of great magnitude, by generating disease on an extended scale, ought to be adopted with peculiar circumspection; but instead of this, in the case before us, the ablest reasonings of practical philosophy were urged in vain, whilst the baseless theories of the visionary and the experimentalist were alone received as the offspring of science!

Drs. Barry and Russell were honoured with titles, as well as Sir William Pym, the godfather of contagion before them; but Dr. Hamett, one of the ablest surgeons in the Navy, who was promised the same rewards as the former, was nearly ruined for his honest conviction that cholera was not contagious. The medical world has since declared that his investigation of the disease at Dantzic was the most laborious and correct ever offered, and even the Board composed of the College of Physicians declared that his Symptomatology was for accuracy equal to that of Aretæus. The Collegiate Board, however, cushioned his proofs of the non-contagiousness of cholera, and had he not a second copy, the world, would never have known them. He, however, was not honoured with a title, as he presumed to differ from the Halfords, the Pym, the Barrys, Russels, *et hoc genus omne*.

But to return to quarantine.—The industry of thousands not only in Sunderland, but on the River Thames also, was paralyzed by restrictions on the coal trade, and thus their means of providing against winter denied to them; and should a sickly season ensue, under quarantine regulations, combined with want of food, clothing, and other necessities, maladies of fully as dire a consequence as cholera itself will follow. Thus, in seeking to avoid an ideal Scylla we encountered Charybdis.

The imperfections of human nature require that both sides of a question should be heard ere even a partial decision be recorded. The disease which existed at Sunderland, I will venture to affirm, in many cases was not cholera, but a modification of scurvy or

* Though he never visited the hospitals during the prevalence of yellow fever; and hence his opinions were scouted by the French Academy of Medicine.

scorbutic dysentery, a malady which the individuals sent to investigate the nature of the occurrences at Sunderland probably had never before seen.

All measures, however well intended, which are adopted under the influence of alarm, whether in reference to nations or individuals, generally prove unsatisfactory, and often dangerous; and in proof of this opinion, I beg leave to advert to events long anterior to the present period, as well as to occurrences of a more recent date, all, however, bearing upon the point in question.

The plague of 1665 gave rise to the quarantine laws; and on weighing the evils they have inflicted on humanity, and the extraordinary embarrassments they have thrown in the way of trade and commerce, from the period of their commencement to the present moment, they will be justly regarded, by all reflecting men, to have been, and still continue to be, a plague of portentous omen, as bearing injuriously on life and the resources of the country, without any thing like commensurate benefit. The elements have been hitherto merciful; but had it proved otherwise, the quarantine laws enacted would have been the means of offering up many human victims at Sunderland, as they did in America.

Between the circulars of the Board of Health (certainly not emanating from Apollo), and the restrictions on the commerce of Sunderland, as also the payment of the various itinerant quarantine contagionists, great and small, the country has suffered to little less than a million sterling. The evils arising to our commerce throughout all Europe, and at a time too when such obstructions could be so ill borne, are subjects of grave and painful consideration, particularly when we reflect that they ought to have been prevented by a more considerate course.

There was a Board of Health at the India House; another of a similar description at the Horse Guards, and a third at the Admiralty; the members of all which are men of high character, combined with great practical knowledge; men who have witnessed the malady called Cholera at home and abroad, and whose character and situations would have been vouchers for the accuracy of their proceedings; and they were further recommended as not possessing the empyrean moral virtue of Oxford and Cambridge, so much dreaded by M. D's. of Ireland and Scotland, when in operation at the sanctuary, Pall Mall East, in subjecting their pockets to an ungracious evacuation. It does, therefore, appear somewhat extraordinary that the Government should have gone so much out of its way as to apply to the President and Fellows of the College of Physicians, with such able and honourable men, as army and navy surgeons, all, doubtless, ready to have obeyed its commands,

from their constituting an integral part of the public service. Had the Government required a treatise *de rebus omnibus et quibusdam aliis*, certainly the College of Physicians might be properly chosen; but as the state of the country at large demanded a *practical* opinion, it could not have gone to a worse mart. This corporate body, from the period of its creation, has never failed to exhibit a strong sense of its own interests, regardless of the welfare of the profession, or of the community. Need a more positive proof of this be offered, I repeat it, of their sacrifice of humanity to patronage, than appears by the revolting circumstances which took place while those labouring under mental derangement were placed under their care, as well as by the nomination of men as members of boards, physicians of hospitals, and professors, celebrated, not for their talents, but for their want of knowledge and experience? Those medical men of the army and navy who have honourably and conscientiously served their country, have just cause to complain of such preference of the fellows of the College of Physicians; and the more particularly when they beheld an individual a member of two boards, who possessed little experience*.

Had the government acted wisely it would have appointed a Board of Health composed of certain members of the College of physicians, certain dispensary and hospital physicians who were well acquainted with the insalubrious parts of the capital and sources of disease, together with a certain number of Army and Navy physicians and surgeons who had observed cholera in Asia and other countries; but such a board would go between the wind and the nobility of their high mightinesses—the Fellows of the College of Physicians.

Medical men were much too busy in the management of a truly formidable malady, because like the community at large, they allowed themselves to be bewildered and led astray by the morbid instructions emanating from the President and Fellows of the College of Physicians and Board of Health.

Both these bodies were adepts in the

* It is in their corporate capacity that we censure, because we have no personal enmity. Lord Durham, as well as the Lord Chancellor, were well acquainted with the moral virtues of the College in the department of the insane, which must be remembered by these illustrious statesmen as having been, as a corporate body, corrupt, rotten, and defiled; and, at present, to use the language of a celebrated knight, a compound of villainous smells, that can only be cured by the Warburton chloride. The cholera had prevailed a year, before Sir H. saw Lady Durham, though he and his board were advising the profession how to treat it.

drama of contagion; and, like their predecessors in all ages, involved themselves in mystery, and thus engaging the public imagination by false views of the causes and cure. Hence fumigating, roasting with hot plates, steaming, boiling, bleeding, transfusing, vomiting and purging, cupping and pickling were all employed in turn; but, as all know, without any salutary effect that can be considered satisfactory in a curative or preventive point of view*. Such counsels, from which wisdom was expelled, caused alarm throughout the kingdom, and the unfortunate patients were often abandoned by their friends, and in danger of being buried alive †. These efforts of the pestilential stars, with contagion for their stage, were attended by much that was very disingenuous, in choosing none but confirmed contagionists at home and abroad as their travelling scene-shifters; but all would not do, and truth prevailed.

The cause of cholera was the morbid condition of the atmosphere, moving in currents, and acting on the human frame, rendered highly susceptible of disease by the pre-disposing causes just adverted to. In arresting the extension of disease, quarantine laws and cordons sanitaire have not only been useless, but actually dangerous and destructive; so that in many instances on the Continent they have been regarded, by the intelligent and humane, as the laws of human sacrifice rather than the sources of its protection. Thus their extension to this country excited disgust and indignation, by unnecessarily separating the diseased individual from his friends at a time when his life depended on their aid and consolation.

The Collegiate Board gravely contemplated surrounding cholera patients with a troop of dragoons, in imitation of the Plague Boards, but they did not, like the latter, order the doors of the infected to be marked with a red cross, headed with the words—"The Lord have mercy on us," as mankind had none. Neither did they analyse the contagion like the former, and find it, like Hodges in his *Lomologia*, after having been breathed on a piece of glass, "composed of all poisons, arsenic, hemlock, &c., &c., and devils frightful to behold." They did not go to this extent, but they nearly approached it. They ordered the dead to be buried with indecent haste; and many instances occurred, as already stated, in which the supposed dead revived on the closing of their coffins. They hesitated to allow Lord

Durham to gaze for an instant on the countenance of his mother; they advised him to change his clothes as soon as possible, to fly into the country to avoid contagion, while the bodies of cholera subjects were, in the anatomical theatres, undergoing the scrutiny of numerous students.

My object in directing the attention of our profession, and, through it, the public, to quarantine laws, is to show how useless they are in preventing epidemic diseases, and how injurious they are to trade, commerce, and the happiness of the community. To you the British public is indebted for rendering such a law a dead letter; when the cholera re-appeared in 1832 and 1833, you were a non-contagionist from the first appearance of the disease to its disappearance: you were well abused by the *Lancet*, whose sub-editor, at that time, was a paid cholera hunter. He denied that your statement was correct, that the members of the Board of Health had 60*l.*, 40*l.*, and 20*l.* a month for their services in diffusing alarm throughout the country, and, in time, throughout the world; and you replied the following week by stating the exact pay of each of the meritorious members of the Board. The public press promulgated your exposure; the Faculty of Paris confirmed your opinion of the non-contagiousness of cholera; the Board of Health now declared the disease non-contagious, and advised the large hospitals to admit patients, just as the disease was about to leave us.

In stating these recorded facts, I cannot be accused of complimenting you undeservedly. They stand recorded in your journal of the period to which I have referred. I revive this subject now, because the Warburtonian Chloride has not as yet been applied at head quarters. The focus of mischief exists, and may perchance once more diffuse its pestiferous influence over the nation, and the rest of the world*. This is possible, but very improbable. But I anxiously wish to put the profession on its guard against the humbug of the paid contagionists. To me, the conduct of Boards of Health is perfectly indifferent. I have nothing to gain or lose by Cholera or any other epidemic disease. The public has enabled me to retire from practice, but the interests of humanity impel me to expose the ignorance, avarice, and fraud of those who ought to be above suspicion, and exercise the noble and beneficent art of medicine, in the manner in which it has ever been exercised, with few exceptions, for the good of humanity.

* The whole offers a most revolting example of empiricism, unsupported by either anatomical, physiological, or pathological truths.

† In fact, instances occurred in which the supposed dead revived when the undertaker was about to screw down the lid of the coffin.

* The present ministry is scion of that which was duped on the first eruption of cholera, and the College is still the *sons et erige, malorum publicorum, et medicorum*.

DR. GOLIS'S TREATMENT OF THE
DISEASES OF CHILDREN.

Diseases of the Abdomen.

Diarrhœa.—When diarrhœa in children is accompanied by pain in the belly, we may always admit the existence of a sub-inflammatory state. Diluents alone must then be administered. In simple ordinary diarrhœa, a mixture is prescribed, consisting of two ounces of a decoction of mallow and saloop, and two drops of Sydenham's laudanum. The dose is a teaspoonful every hour or every two hours.

In catarrhal diarrhœa Dr. Gölis prescribes as follows: *Rx.* Decoct. althææ, \mathfrak{z} iij; Extr. daleam. gr. iij; Laud. sydenh. gtt. ij; Syr. papav. \mathfrak{z} ss; M. sit dosis coch. j. min. omni horâ.

If a diarrhœa of this kind lasts long, camphor in small doses becomes an excellent remedy; it produces a peculiar and comfortable sensation of warmth in the stomach. Thus he prescribes, *Rx.* Camph. solutæ, gr. ss; Decoct. emoll. \mathfrak{z} j ad \mathfrak{z} ij; Laudani, gtt. j ad ij; M. sit dosis coch. j min. omni horâ vel omni 2 â h.

When a tonic is required in chronic diarrhœa, he uses calumba; but there must be no fever, and the intestines must not have been despoiled of their mucus by violent alvine evacuations. Half a drachm of calumba and ten grains of saloop are to be boiled for a quarter of an hour, so that the strained decoction may amount to three ounces; half an ounce of syrup of chamomile is then to be added, and the dose is to be a tea-spoonful every hour. Or a mixture may be employed, consisting of two ounces of a decoction made with eight grains of saloop, eight or ten grains of powdered calumba, two drops of laudanum, and half an ounce of syrup of poppies. To be given like the last mixture, shaking the bottle every time.

If atony already exists, fifteen drops of Hoffmann's elixer (Sp. æther sulph. C.) may be substituted for the calumba.

In a chronic diarrhœa following a mucous fever, Dr. Gölis prescribes, *Rx.* Arnicæ rad., \mathfrak{z} ss; Calumbæ rad., \mathfrak{z} ij. Macera per horæ quartam partem, et post colationem restent uncie quatuor, tum adde laudani, gtt. ij; Syr. menth., \mathfrak{z} ss; the dose to be a tea-spoonful for a child three years old. When diarrhœa causes a flaccidity of the intestines, Dr. Gölis prescribes, Aq. destill. ceras. nigr. \mathfrak{z} iij; Extr. taraxaci, \mathfrak{z} ij; Extr. rhei, \mathfrak{z} ss; Ammon. muriatis, gr. vi; Syrupi menthæ, \mathfrak{z} j. M. sit dosis coch. j min. He orders, moreover, the whole abdomen to be rubbed with the ung. nervinum, made stronger by the addition of camphor.

When a chronic diarrhœa is complicated with worms, Dr. Gölis prescribes as follows: *Rx.* Valerianæ rad., \mathfrak{z} ss; Calumbæ rad. \mathfrak{z} j.

Aquæ q. s. ut post colationem infusi, restent, \mathfrak{z} v, quibus adde, Camph. solutæ, gr. j; Laudani gtt. ij vel iij; Syr. aurant., \mathfrak{z} ss. The dose to be a teaspoonful for a child four years old.

In rachitic children diarrhœa produces prolapsus of the rectum.

The Cholera of Children.—When this disease is of an inflammatory kind, it is very serious; gangrene is apt to occur, and the child is lost. A sinapiam applied to the belly until the skin begins to grow red may sometimes save the little patients. In ordinary cholera, Dr. Gölis gives the following medicines internally: *Rx.* Inf. Glycyrr. c. Decoct. Emoll. \mathfrak{z} ij; Laudani, gtt. ij; Sp. æther. sulph. comp. gtt. vi; Syr. papav., \mathfrak{z} ij. And the following ointment to be rubbed upon the epigastrium: *Rx.* Ung. nervini, \mathfrak{z} ss; Camph. \mathfrak{z} ss; Opil, gr. ij.

The ether, however, is not always advisable at the beginning of the disease, and Dr. Gölis then prescribes a potion, consisting of a decoction of three ounces made with eight grains of saloop, with two drops of laudanum, and half an ounce of syrup of poppies.

Vomiting.—Dr. Gölis treats cases of obstinate vomiting in the same manner as cholera.

Constipation.—The following remedies are prescribed against ordinary constipation: *Rx.* Inf. glycyrr. et decoct. emoll., \mathfrak{z} iij; Magnesiae sulph. \mathfrak{z} j ad \mathfrak{z} ij; Syr. \mathfrak{z} ss. Or else, *Rx.* Inf. fœniculi, aq. fœniculi, â â \mathfrak{z} ij; Tr. rhei aquosæ, \mathfrak{z} ij; a teaspoonful to be taken every hour.

Colic.—Colic may be easily recognized in children; they are restless, cry constantly, stamp on the ground, draw the thighs up to the belly, have twichings of the face during sleep, and awake crying. When we examine a child whom we suppose to be suffering from colic, we must not neglect to see if its sufferings proceed from some external cause, such as the pinching of some part of its dress, or the pricking of a pin. During attacks of colic, children pass their water often and in considerable quantity. Different internal causes may cause colic; such as,—1st, *Acidity*, which is known by the stools being green; in this case the following mixture is given; *Rx.* Inf. et aquæ fœniculi aa \mathfrak{z} ij; Magn. carb. gr. xv; Laudani sydenhami gtt. ij; Syrupi \mathfrak{z} ss; 2dly, *flatulence*, which is known by borborygmi and wind. The following mixture is then given, with or without the addition of magnesia: *Rx.* aquæ fœniculi \mathfrak{z} ij; Mucil. acaciæ \mathfrak{z} ij; Laudani gtt. ij; Syrupi anthem. \mathfrak{z} ss;—3dly, *indigestion*, in which case the following mixture is prescribed: *Rx.* aq. fœniculi \mathfrak{z} ij; Tr. rhei aquosæ \mathfrak{z} ij; Magn. muriatis \mathfrak{z} ss; Syrupi \mathfrak{z} ss.

Worms.—Dilatation of the pupil is not a pathognomonic sign of the existence of worms, for this symptom is also found in

cases of infarctus of the intestines. Dr. Gölis's ordinary remedy against worms is as follows: *Rx.* hydr. subm. gr. iij; Valerianæ pulv. \mathfrak{z} j; Sacchari albi \mathfrak{z} j. This is divided into four or six powders, according to the age of the patient, and three are to be taken daily.

Sometimes he adds a scruple of wormwood seeds. He also prescribes the following formula: *Rx.* Inf. glycyrr.; Decoct. emoll. \mathfrak{a} \mathfrak{a} \mathfrak{z} ij; Extr. valerianæ. \mathfrak{S} ss; Oxym. scillæ, \mathfrak{z} ij. The dose is a teaspoonful.

And afterwards the following purgative: Hydr. subm. gr. iij; Jalapæ pulv. \mathfrak{z} j; Sacchari albi, \mathfrak{z} ij. This is to be made into four or six powders, one of which is to be taken every evening.

The following anthelmintic is also employed by Dr. Gölis: *Rx.* Inf. glycyrr.; Aq. tanacetii, \mathfrak{a} \mathfrak{a} \mathfrak{z} ij; Fuci helminthocorti pulv. \mathfrak{z} j; Oxym. scillæ, \mathfrak{z} ss. A teaspoonful to be taken every hour.

In cases of ascarides clysters of milk are administered in which garlic has been boiled, or clysters of a decoction of garlic and wormwood. To draw out worms of this species, the children are placed on a chamber vessel into which warm milk has been poured.

Infarctus of the Intestines.—In this disease Dr. Gölis gives merely resolvent medicines. *Rx.* Inf. fœniculi; Aq. fœniculi, \mathfrak{a} \mathfrak{a} \mathfrak{z} ij; Potassæ supertart. \mathfrak{S} ss; Oxym. scillæ, \mathfrak{z} ij. The dose is a tea-spoonful.

Some other resolvent salt may be substituted for the cream of tartar. Externally he employs equal parts of mercurial and juniper ointment rubbed upon the abdomen; and at the same time he puts the patient on the use of acorn coffee and tepid baths. According to Dr. Gölis there is a certain globular shape of the cheeks, which is a true diagnostic sign of intestinal *infarctus* (obstruction) in children. This bulging out corresponds to the malar bones, and looks as if an almond had been placed under the skin: it is particularly obvious when the child laughs or cries. When this symptom is present, the case is hopeless.

Icterus neonatorum (Jaundice of new-born children.) The following prescription is used in such cases; *Rx.* aq. fœniculi; Inf. anthem. \mathfrak{a} \mathfrak{z} j; Magn. subcarb. \mathfrak{S} ss; Tr. rhei aquosæ, \mathfrak{z} ss; Syr. papav. \mathfrak{z} ss. The dose is a teaspoonful. If the bowels are confined, the following mixture may be given: Inf. glycyrr. aq. communis, \mathfrak{a} \mathfrak{z} j. ad \mathfrak{z} ij; Extr. taraxaci, \mathfrak{z} j. ad \mathfrak{z} ij; Sodæ; Sulph. \mathfrak{z} ij; Syr. man. \mathfrak{z} ss. The dose is a teaspoonful.

Prolapsus of the rectum.—When the intestine has been reduced, Dr. Gölis orders clysters of cold lime water.

Poisoning by opium.—In this case he ordered a bath with vinegar of half an hour's duration, and a teaspoonful of the following mixture every quarter of an hour. *Rx.* inf.

glycyrr.; Decoct. emoll. \mathfrak{a} \mathfrak{z} j. Ammon. uccin. gtt. viij.

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STRUMOUS OPHTHALMIA.

MR. HUGH NEILL, Surgeon to the Liverpool Ophthalmic Infirmary, speaking of strumous ophthalmia, says that it often receives its beginning from either measles or scarlatina. There is the characteristic fever, intolerance of light, red tongue, full belly, &c. Although I have tried every treatment, none has ever had such happy effect as a long continued, but gentle, use of some of the milder preparations of mercury. The blue pill mixture is the best form for its administration to children—it will be weeks before its effects are developed, in some cases. To treat this disease with success, the surgeon must possess the confidence of the parent—for the attendance is always tedious; but by this blue pill mixture, or calomel, the complaint will be overcome; and unless there be ulcer, no other remedy need be applied to. I could relate a multiplicity of cases successfully treated upon this plan alone.

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BOOKS.

On the Medical Properties of the Natural Order Ranunculaceæ; and more particularly on the Uses of Sabadilla Seeds, Sclaphisagria, and Aconitum Napellus, and their Alcaloids, Veratria, Sabadilline, Delphinia, and Aconitine. By A. Turnbull, M.D. 12mo. pp. 170. London. 1835. Longman and Co.

Dr. Turnbull is entitled to great praise for introducing some valuable new medicines into use in this country; and it is to be hoped he will continue to do so.

An Essay on Artificial Teeth, Oblurators, and Palates; with the principles for their construction and application. Illustrated by Twenty-six Cases and Twenty-one Plates. By Leonard Koecker, Surgeon-Dentist, Doctor in Medicine and Surgery, &c. 8vo. London. 1835. Highley.

The Gulstonian Lectures, delivered at the College of Physicians, on the 6th, 8th, and 13th of May, 1835, by A. P. W. Philip, M.D., F.R.S., L. & E., &c. 8vo. pp. 38.

In the Press.—Practical Observations on the Nature and Treatment of Nervous Diseases; with Remarks on the Efficacy of Strychnine in the more obstinate Cases. By G. Russell Mart, M.R.C.S.L., late of His Majesty's Hospital Ship, Racoon.

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ERRATA.

Page 639, for anus, read arms; for serri, read ferri.

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VOL. VII.

LECTURES
ON THE
INSTITUTIONS OF MEDICINE,

DELIVERED BY JOHN FLETCHER, M.D., F.R.C.S.E., AT THE ARGYLE SQUARE SCHOOL OF
MEDICINE, EDINBURGH; SESSION 1834-35.

LECTURE XXIII.

*Instinct and Passion as Stimuli to Irritability—Mode of transfer of a Primary Irritation—
Rationale of Sympathy.*

SUCH, then, are a few of the principal isolated effects of passion, collectively considered, as a stimulus to the irritability of the several organs; and some of those of instinct—a term which, as will be in future shown, is applied only to that form of passion which is attended with desire, and the actions excited by which conduce always to some definite end—are of course identical with some of them, but, while, on the one hand, they cannot with propriety be made to embrace all the actions excited by passion in general, they include, on the other hand, not a few which are more properly regarded as instinctive, and which accordingly are seldom referred to passion in general as their stimulus. Among the irritations which may be said with equal propriety to result from either passion or instinct, in the sense of the latter term, above specified, are those by which the mucilage of the vagina becomes accumulated preparatory to copulation; by which the intestinal gases and stools are, in some animals, increased in quantity and vitiated in quality, as a means of self-defence; by which an increased secretion of milk is effected, for the purpose of affording nourishment; by which the quantity of semen is augmented, as instrumental to propagation; and by which the saliva becomes accumulated, preparatory to manducation. The irritation, likewise, on which indirectly depends the erection of the clitoris, of the fimbriae of the fallopian tubes, of the nipples of the mammae, or of the penis, conducive as all these actions are to a definite end, is referable indiscriminately to passion collectively, or to instinct in particular, as its stimulus. And the same thing may be said of the various irritations whence result vomiting, the effect of which is to expel any matters which excite disgust; sighing or yawning, both which tend to relieve the sensation of general oppression arising from sadness or annoyance; winking, the end of which is to defend the eye-ball from a threatened injury; starting, for the purpose of withdrawing the body from any object of alarm; and general rigidity, as a means of bearing up against danger of any kind. The other actions above enumerated as resulting from passion in general, as their stimulus, cannot with equal propriety be referred to instinct; while, on the contrary, there remain to be mentioned some, which, although, strictly speaking, they should be comprehended under the effects of passion—since a whole must of course embrace all its parts, and instinct is merely a department of passion—still, in common language, are referred to instinct exclusively. Of this nature are the action of respiration as excited, not by sympathy, in the ordinary way, but by a desire to breathe, produced by an uneasy sensation, arising from some impediment in this function, but without any distinct act of volition as prompted by a deliberate persuasion of the competency of such action to alleviate such sensation; that of taking food or drink by animals in general, and of sucking by the young of mammals, as excited by a similar desire produced by the uneasy sensation of hunger or thirst, and that of voiding the stools or urine, and of copulating, as excited, each in like manner, by a desire produced by an uneasy sensation: and it is remarkable that all these actions, as prompted thus by an impulse far less fallible in its proposed end than that of reason, and as immediately excited by a stimulus far less fallible in its operation than that of volition, are always precisely such as are best adapted to the end in

view, and are as perfectly performed the first time they are attempted, as at any subsequent period. It appears, indeed, that these circumstances may be taken as a kind of test of an instinctive, as opposed to a rational action—that it springs from a blind impulse produced by an uneasy sensation, without any reasonable conviction of the adequacy of the means adopted to attain the end in view, that it is nevertheless always precisely that which most directly conduces to this end, and that it is consequently quite unsusceptible of subsequent improvement. It is hence obvious that, while the greater number of the actions of man are rational, not a few of these actions are instinctive; and, on the other hand, that, while a comparatively small number of those of the lower animals are excited by volition, the majority of them are excited by instinct (a). To the latter head are referable in both, not only the actions of respiring, under any uneasy sensation excited by a temporary suspension of this function, of taking food and drink, of excreting the stools or urine, and of copulating, but also numerous others, more or less connected, as well with these functions, as with that of voluntary motion—that is to say, of the motion of muscles, the usual stimulus to the action of which is volition. Thus, the return by every animal, terrestrial and aquatic, to that element, whether air or water, in which alone its respiratory process can be exercised, and from which it has been for a time excluded, is excited, not by volition founded upon a deliberate persuasion of the subserviency of either medium to the end in view, but by the blind impulse in question; and the same is the case with the selection by all animals, herbivorous and carnivorous, of their own character of food, as well as by each individual of its own particular variety of this, in the same way as in certain states of the human stomach, we swallow acid, and in others alkaline substances, without any thing like a reasonable conviction of their efficacy in removing the uneasy sensation which produced the desire to do so. The actions, likewise, of hoarding up grain by the ant, and honey by the bee, as well as that of burying its superfluous food by the dog, and numerous other similar actions of the lower animals, all manifesting apparently the most admirable foresight, are, in all probability, to be traced to a similar desire, produced by an uneasy sensation, which a neglect of these actions, like a suspension of any one of the natural functions, occasions; and it is as actuated by some such impulse that the cat is accustomed to cover her excrement with earth, and, like an automaton, makes the movement of doing so, even when she has been compelled to void it on a floor, and when of course such movement cannot conduce to any useful end. In like manner, the deposition, by insects, of their ova in putrescent matters, calculated to afford nourishment to the larvæ upon their being hatched, is probably ascribable to a similar blind impulse: they think nothing of the furtherance of any ultimate end by their operations—for they do not in general live to see their offspring—but they are excited to the action by a desire, produced by an uneasy sensation, which arises probably from the peculiar odour of these substances, in the same manner as a dog is excited to void its urine by the odour of certain plants, or by the stale urine of other dogs; and, accordingly, such insects, misled by the putrescent odour of some plants, not unfrequently deposit their ova in the heart of them. Again, it is to such an impulse or desire produced by an uneasy sensation, which that kind of locomotion adapted to the peculiar organism of each, can alone allay—although without any such purpose on the part of the animal—that we must attribute the selection, by every animal, of that medium in which alone this locomotion is possible. It is this which leads the tadpole, immediately, upon becoming a frog, from the water to the land; the duckling, the first time it has an opportunity, from the land to the water; and the fowl of the air—the native inmate of a cage—immediately on finding itself at liberty, into the atmosphere; and it is thus that, without exciting any individual exercise of such locomotion, the ordinary stimulus to which is volition, the impulse in question carries each animal into that medium in which alone it can be exercised. Such, likewise, appears to be the indefinite desire, dependent in like manner indirectly upon their organism, and quite independent of any deliberate object of either resisting danger or procuring aliment, which excites some animals, as most of the herbivorous tribes, to become gregarious, and others, as most of the carnivorous, to avoid the society of their fellows; and it is as actuated by a similar blind impulse that so many tribes, at certain seasons, engage in their several migrations, and accomplish, in the course of them, undertakings which reason would not have dared to prompt, and which volition would have been inadequate to execute. The degree of desire, in these cases, appears to amount to a kind of enthusiasm; and all enthusiastic actions are instinctive, and therefore, in our own species, frequently such as to surprise even the en-

(a) It needs hardly be observed that the present is not the place for discussing the abstract nature and differences of reason and instinct—a subject manifestly appertaining to the head of Thought. Instinct is spoken of here merely in its character of a stimulus to irritability, exciting motion sensible or

insensible; and it is no more necessary, for the purpose of following it out in this relation, to begin with a full description of its abstract nature, than it was to begin with a description of that of caloric, light, or electricity, in treating of these agents in a similar capacity.

thusiasm himself, on again subjecting himself to the sober dictates of reason and volition. They are like those of a person somewhat elated by wine, or one partially insane; and if a special providence seems sometimes to preside over the actions of a drunken man and a maniac, it is only because they are actuated, under circumstances of difficulty, by a power less fallible both in its end and the means employed to attain that end, than reason and volition. It is hence obvious that many motions commonly excited by volition, may, under certain circumstances, be excited by instinct—and this without reference to habit, which, as will be presently shown, seems always to render motions which were at first exclusively voluntary, ultimately instinctive also; and it is hence easy to understand how, in the lower animals, the blind impulse of instinct should be competent to excite numerous actions, corresponding to those which, in man, can be excited only or chiefly by volition. Thus, when the latter would construct a fabric, or build a house, he proceeds upon a plan more or less deliberate, adopts means which are at first in a greater or less degree inadequate to the end in view, and it is only after efforts more or less frequently repeated that he attains any thing like perfection in his manufacture; but the spider in constructing its web, or the silk-worm its cocoon, the bee in building its comb, the bird its nest, or the beaver its hut, without any deliberation, adopts at once the most effectual means of attaining a certain end, and the resulting fabric or edifice is as perfect the first time it is attempted, as it can ever by any possibility become. These are the criteria of instinctive, as distinguished from rational actions; and the more nearly man, in attaining perfection in his manufactures, approaches to these conditions—in other words, the more he is actuated in their production by instinct—the greater is his genius—the more by reason and volition, the greater his talent. It is most erroneous to imagine that we detract from the proper rank of the lower animals by representing them thus as a kind of automata; since we are in fact raising them to that of artists, acting under an impulse by which it is the highest glory of man to be actuated (a).

It is the consciousness of the existence within us of a power superior to any over which we have control, which has led poets in all ages to invoke Apollo and the Muses to inspire their verse—in other words, to call upon Passion or Instinct to supersede Reason; and that some such instinctive power actuated the mighty hand of a Michael Angelo and a Raphael, and excited the merely physical movements destined to develope works on which ages were to ponder with admiration and delight is unquestionable. It is true the instinct thus running riot over the reason, is, in man, very liable to become morbid, and it is this subserviency of many of the actions of a great genius and a maniac to the same blind impulse, which produces that close alliance of the sublime and the ridiculous, the lofty and the bombastic—as well in works as in thoughts and words—which has furnished, in every age, so fertile a theme of animadversion: both equally recede from the reasonable—and the only difference between them appears to consist in this, that, while the former so far carries with it the mind of the judge, as to warp his judgment, by inspiring him with some degree of that enthusiasm in which the conception originated, the latter fails in this object, and by leaving him in full possession of his reason, stands exposed at once in all its native deformity. An unhappy point in the most majestic statue or picture, like an ill-timed word in the most elevated sentence, frequently has the effect of suddenly awakening us from a day-dream of admiration; and what we were perhaps about to pronounce a model of the grand, becomes at once a beacon of the ludicrous—the insignia of royalty differ only in the spirit in which we contemplate them from the tinsel of Punchinello. One more remark remains to be made respecting instinct, as the stimulus to the irritability of the various organs, particularly of those which, under ordinary circumstances, obey rather that of volition, and that is, that it is probably the source of that ease and accuracy in the several movements which are gradually acquired by habit. It has been already remarked that an instinctive action is unsusceptible of improvement; but this furnishes no objection to the above proposition, since it is not as instinctive that such actions are improvable. In every step which is made towards progressive perfection, the agent in effecting this is volition, but at any given stage of this progress they may be further excited by instinct, which thus perpetuates the improvement which volition has made, and at length renders such habitual actions as prompt and correct as if they had been originally instinctive. The action of sucking, for example, is instinctive; it is perfect from the first, and not only is the exercise of this action in any given instance determined, but all the motions requisite to it are excited, and excited readily and accurately by instinct alone: on the other hand, that of speaking is voluntary; many and many failures are made before a single word can be articulated, but when the difficulty has been once

(a) The instinct of animals, which appear frequently to be so much wiser, in their generation, than the sons of men, is accordingly called by Sir Isaac Newton “the wisdom and skill of a powerful ever-living

agent;” by Addison, “an immediate impression from the First Mover;” by Hartley, “a kind of inspiration;” by Hancock, “the Divine energy;” and, by Mason Good, “the Divinity that stirs within them.”

thoroughly overcome, the action becomes habitual, and so on with respect to every other word, till the language formed of these words has been mastered, and now volition determines only the exercise of speech on any given occasion, and excites the motions which are the effect of it, but it is instinct or desire, produced by the uneasy sensation which a suspension of a function, not indeed in this instance natural, but acquired, always occasions, which calls them into action with facility and precision. But this subject will fall to be resumed under the head of Volition, regarded as a stimulus to irritability.

These then are a few of the most remarkable examples of the operation of passion or instinct as a stimulus to irritability during health; and, were it consistent with our present object to regard them either as agents in the production of diseases, as constituting a feature in the symptoms, or as instrumental to their cure, still more striking instances of this operation might be adduced. Suffice it to say at present, there is scarcely any disease, organic or functional, which may not be excited by one kind of passion or another; that there are few or none in the course of which the passions do not play a more or less active part; and that upon almost all, the several passions have been brought to bear with greater or less effect, as a remedy, from the times of the priests and prophets, through those of the magicians, sorcerers, wizards, necromancers, astrologers, conjurers, exorcists, and Rosicrucians, to the days of the followers of Gatorex, Messmer, and Perkins, the worshippers of Hohenloe and the proselytes of St. John Long. "A merry heart," saith the preacher, "doeth good like a medicine;" and, he might have added, often much more abundantly—a fact known to charlatans from time immemorial, but which regular practitioners, in the pride of their superiority, for the most part have yet to learn, or, if they know it, have at any rate yet to avail themselves of that knowledge.

Nor is passion or instinct in all probability a less general and important agent in promoting all the vital actions, at least of the higher tribes of animals—in addition to these more or less isolated examples of its operation—than sympathy. If the healthy irritation of each of the other organs of the body be in some degree essential to that of all the rest, it seems to follow *à fortiori* that that of the brain—the seat of passion or instinct—will be at least equally necessary; and it is accordingly this stimulus which we allude to when we speak of a permanent influence from the brain, as conducive to all the natural functions of the body. The irritability of the respiratory muscles is indeed immediately excited principally by an especial sympathy, that of the heart and capillary system principally by the blood, that of the stomach principally by the aliment, and so forth; but to the perfectly healthy action of each of these organs many other stimuli, including the one now in question, are requisite, as is obvious from the laborious respiration, the slow pulse, the diminished secretions, the torpid digestion, &c., which characterize those states of the system in which the action of the brain is suppressed or impaired. Such however is of course the case with animal sympathy, as well as with organic, only in those tribes of animals in which the brain, in common with the other organs, is so concentrated, as to call for this indirect association of its functions with those of the rest of the system; and in precisely the same ratio that system of nerves, which we shall presently find is, in all probability, the means by which this association is maintained, is found to be developed (a).

The question now arises, by what channel is the direct and primary irritation of one organ, so translated to a distant one, as to become there a new stimulus to irritability? And in the first place, it may be observed that irritation, consisting as it does in the action, either sensible or molecular, of solid tissues, may be as easily supposed capable of exciting the irritability of parts directly contiguous to those which are undergoing it as the direct application to them *de novo* of any chemical or mechanical agent; the immediate stimuli to irritability not being, any more than irritability itself, in any case substantial, but merely a power attached to something that is so, and dependant probably as much upon a new mode of being of substances already present, as upon new substances being brought into operation. Irritation, then, is not only the result of a stimulus acting on irritability, but may be itself a stimulus to irritability, and thus excite further irritation, at least of contiguous parts, as well as under certain circumstances to sensibility, and thus excite sensation, as sensation again may be to the faculty of thinking, and thus excite thought. All this will be more particularly explained in future; but in the meantime it becomes a

(a). Passion has never been quite identified, like caloric and so many other stimuli to irritability, with life; but it was regarded by the ancients as the next thing to it. This is sufficiently indicated by the fable of Prometheus, who, after he has vivified his clay statues with fire, as before stated, is represented to have found, as Dean Swift says, that "they looked so like the latter end of a Lord Mayor's feast, that he could not bear

the sight of them." He was obliged, accordingly, to actuate them by various passions, which he culled, for the purpose, from the different tribes of animals, "and so tempered together before infusion, that they became the most amiable creatures that heart can conceive." The passions, as before observed, were one of the six non-naturals of after-times.

question, by what means is it that, passing over contiguous parts, a direct and primary irritation, whether of other organs or of the brain, becomes so frequently an indirect and secondary stimulus to the irritability of parts at a distance, and that apparently on grounds altogether indefinite and arbitrary? Previously to entering on this inquiry, however, it is to be observed, that by some authors the immediate seat of passion or instinct has been presumed to be the several viscera of the chest and belly (a); so that it would appear that the translation of the irritation is, in this case, rather from the organs in question to the brain—if the brain have anything to do with the matter—than in the opposite direction; but there is a fallacy in this view of the subject, which must be met *in limine*. That passion or instinct, as a mode of thought, must be preceded by sensation, as sensation must by irritation, has been already admitted; but it is absurd to call the seat of this primary irritation that of passion or instinct, or to confine it to the viscera of the chest and belly, if we do so. Passion or instinct, as a mode of thought, can no more be seated in any organ except the brain, than palpitation of the heart can be seated in any organ except the heart; and though such passion or instinct may be produced by the sensation of touch or tact, in one or other of its innumerable modifications, arising from irritations of some of the viscera in question, as is the case of a desire to eat, to void the stools or urine, or to copulate, indirectly from irritations respectively of the stomach, rectum, urinary bladder, or genital organs, it is much more frequently produced by the sensations of smell, sight, hearing, or taste, arising from irritations severally of the nostrils, eyes, ears, or tongue. But speaking, as we are now doing, of passion or instinct merely as a stimulus to irritability, we have nothing whatever to do with its origin: we regard it as a ready-made irritation of the brain; and, in this view of the matter, have now to attempt an explanation of the manner in which this irritation, in common with that of sympathy in general, is translated to other parts.

The first opinion entertained upon this subject was founded upon the tenets of the ancient humoral pathology, which inculcated that wherever irritation—which term was always employed by them in a morbid sense—was excited in any part by the application to it of some peccant matter, one or other of the four principal fluids of the body, already alluded to, set off, urged by the everlasting vital principle, on an expedition against it; and hence the vague and absurd axiom, *ubi irritatio, ubi fluxus*, still unhappily too often in the mouths of pathologists. But in the course of the disease, thus excited, the vital principle seems sometimes to have changed its mind; and the fluid in question being drawn off, in some arbitrary way or other, from the part which it first occupied, proceeded elsewhere, and excited the critical discharges and so forth, a consummation which it was so much their object to effect by the use of reputedly revulsive remedies, the operation of which is still so frequently, and so idly, referred to counter-irritation. The seat, then, of the primary, and that of the secondary irritation, were accordingly said to sympathize with each other; and the presumption of these spontaneous influxes of imaginary fluids was received as an explanation of the manner in which they did so (b). On this hypothesis of course any comment would be quite superfluous.

(a) This was the opinion of all the ancient philosophers and physicians without exception, who, while they placed reason in the brain, uniformly consigned the passions to the viscera of the chest and belly, or to these organs and their contents collectively; and hence we find the words breast, heart, belly, stomach, bowels, liver, reins, or kidneys, *στήθος, καρδία, φρένες, σπλαγχνος* &c. constantly used by them as synonymous with passion in its various modifications—a practice which still extends, as will be more particularly insisted on in future, a very remarkable influence over our most familiar expressions. Nor have modern authors been wanting to follow this conceit, Bordeu, Buffon, Bichat, Cabanis, Reil, Broussais, and many others, having represented the passions as rather springing from, than giving rise to certain states of the viscera. Broussais, indeed, defines passion to consist in “the triumph of the viscera over intelligence;” (Principles of Med. § 47); but, as has been aptly asked by Dr. Wilson Philip,

“Can the passions belong alone to that life (the organic) in which they never can be excited—on which they never could operate?” (On the Vital Functions, 1817). No irritation of the stomach or genital organs can by any possibility constitute the desire for food or venery; and if the irritation in which these desires consist be not there, they must be elsewhere, and translated thence, so as to act as a stimulus on distant organs, by some means or other, which still remain to be explained.

(b) This was the doctrine of all the ancient dogmatic or rational physicians (heaven save the mark!) in opposition to the empirics, who honestly confessed that they knew nothing at all about the matter; and it prevailed of course during the twenty centuries that the humoral pathology held an almost undisputed sway over the schools of medicine, and every physician employed the word humour, like Corporal Nym, as a convenient substitute for almost every other. Few are aware how much of the heaven of

Analogous to this vague doctrine of alternating influxes—nobody knows by what channel—of various imaginary fluids, as a cause of sympathetic irritations, is that of either alternating, or simultaneous determinations of blood, which superseded it soon after the discovery of the circulation of this fluid, and which is still not unfrequently alluded to as a means of explaining such irritations. It is in this way, for example, that the participation by the mammæ in the affections of the female genital organs is sometimes explained, the communication between the two, by means of the circulation of the internal mammary and epigastric arteries, being quite competent, it is presumed, to account for such a relation between them (a): but it appears quite unnecessary to enter into the merits of an explanation which is not only quite inapplicable to at least ninety-nine out of a hundred cases of the most obvious sympathetic action, but altogether inconsistent with every thing that is known respecting the laws which regulate the course of the blood, every acknowledged fact tending to the conclusion that, if ever there was one doctrine in physiology more totally unfounded than the rest, that doctrine is the presumption of a determination of blood in any case, and *à fortiori*, of any such alternating or simultaneous determinations as are here supposed. Nor is the doctrine, that it is by means of the blood-vessels or lymphiferous vessels *per se* that the stimulus of sympathy is conveyed (b), in any degree more tenable; since, as it must be obvious that these vessels, without their nerves, are quite incompetent to communicate any vital impression, so what nerves they have are known to be for a very different purpose.

The next hypothesis advanced, respecting the medium of sympathetic irritations, was that it took place through the ganglionic nerves, or system of the great sympathetic, as the name so unhappily given to this system by the first physiologist who well described it sufficiently indicates (c)—and indeed the hypothesis last mentioned is little more than a modification of this, since the only or principal nerves of the blood-vessels and lymphiferous vessels, by which alone, as first observed, they can communicate any vital impression, are derived from the ganglionic system. Nor is it at all surprising that this opinion should have been promulgated. Sympathy and passion are strong stimuli to irritability, analogous to volition; and as it had become established that, while sensibility was the attribute of one of the only two departments of the cerebro-spinal system then known, volition was conveyed by the other, it was very natural to refer the conveyance of sympathy and passion to the ganglionic nerves, as a part of the nervous system hitherto unoccupied, its subserviency to irritability not having yet been thought of. But that this cannot be the office of the ganglionic system of nerves necessarily follows, if the arguments which have been already adduced, at so great a length, to prove what is its office, be admitted. Most of them are indirectly against the proposition in question, and some of them are directly so—in particular the fact that these nerves are developed in all tribes of animals, not in the ratio of their manifestation of sympathy and passion or instinct, but in that of their irritability; that they are, in structure, much more nearly allied to the sensiferous, than to the motiferous nerves; that, like the former, and unlike the latter, they do not readily conduct galvanism; and that, when stimulated, they occasion no irri-

this pathology still clings to us, in this the nineteenth century of human redemption.

(a) Such was the hypothesis of Riolan, the contemporary of Harvey, who was the first to describe the inosculation above alluded to, which, it is remarkable he always met with *in women*. "In mulieribus," says he, *semper animadverti*." How very fortunate!

(b) Blumenbach, *Inst. Physiol.*, 1786; Soemmering, *De Morb. Vas. Absorb.*, 1795, &c.

(c) In speaking of the various alleged uses of the ganglionic system of nerves, it was observed that the above use, among others, had been assigned to them by Willis, followed by Vieussens and Meckel, and that their opinion had been currently adopted by the common-place physiologists of the present day. Mason Good, for example, describes the ganglionic system of nerves as "the emporium of nervous communication, and the instrument of general sympathy," (*Study of Med.*, 1825)—a strong presumptive evidence, if other arguments were wanting, that it is neither the one nor the

other. It is true Bellingeri (*Dissertatio Inauguralis*, 1818), and some others, whose opinions are entitled to more deference, inculcate *in words* the same thing: but they do so, as do also some of the preceding authors, chiefly from regarding the pneumogastric, or, as it has been well called, the little sympathetic nerves, as well as some other nerves as belonging to the ganglionic system, whereas they pretty certainly belong to the respiratory and other departments; so that, *in fact*, their opinion is favourable to the doctrine that it is, at least among others, the nerves which are the vehicles of sympathy and passion. Nor are Dr. W. Philip's proofs that the nerves of the heart convey to this organ extraordinary stimuli, such as those of sympathy and passion, at all less in favour of this doctrine than of the other; since it is not, in all probability, as elsewhere remarked, in that department of them which is derived from the proper ganglionic, but in that which belongs to the respiratory system, that they perform this office.

tation in the muscular parts which they supply—a fact which, although it is easily reconcilable with the presumption of their communicating only a susceptibility of action to these muscles, is quite incompatible with the doctrine that they conduct to them a stimulus. Further, the greater number of the arguments which will be presently brought forward in favour of the opinion that a very different system of nerves, and one which was quite unknown, as a distinct system, at the time that the doctrine in question was first broached, is really the vehicle of sympathy and passion, bear of course indirectly against this doctrine; while there is one which militates directly against it, and that is the fact, that cutting the nerves of the system last alluded to seems at once to put a stop to the conveyance of the stimuli under consideration. It would give rise to endless, and very unnecessary repetitions, on the one hand, to recapitulate here all that has been said in favour of attributing a very different office to the ganglionic nerves, and, on the other, to anticipate all that will in future be said in favour of ascribing this office to a very different system; suffice it to say that every unprejudiced view of the matter must tend to dislodge the ganglionic system from the post which it has, with a certain class of physiologists, so long and so undeservedly occupied.

SELECT LECTURES,

FROM

M. BROUSSAIS'

Course of General Pathology and Therapeutics;
translated and revised

By JAMES MANBY GULLY, M.D.

LECTURE VII.

WITH regard to the duration of gouty attacks, nothing certain can be said. At the commencement they sometimes last twenty-four hours, or not even more than from two to seven hours. In such case they can only be very slight attempts, which leave no marks behind, and after which the resolution of the circum-articular phlegmasia is complete. But when they are further prolonged, the inflammation gets the advantage, and is not so readily resolved. It may induce suppurations in the cellular tissue around the joint: to small pustules, which open, and from under which, through the skin, minute calcareous concretions proceed: to bony affections, that may be followed by caries, when, after repeated inroads on the same point, it becomes concentrated and deeply seated therein. In some individuals no pains occur: the joints swell and become rugged, hard and hot, without causing any sensation beyond a confused inquietude and malaise. This it is that has been erroneously denominated *atonic gout*, instead of simply calling it indolent gout. This indolence is owing to the non-participation of the nervous system in the disease, or the small part it takes in it, as also to the viscera having nothing to do with it. I have seen such persons with their fingers disfigured for twelve or fifteen years, and their hands like bunches of parsnip, and yet without any gastritis—facts that have long since induced me to abandon the opinion I once held, that gout is always dependent on an affection of the stomach and liver. This, however, does not imply that they do not perish from an internal irritation: but the latter comes much more slowly. Thus, then, no-

thing certain can be stated, either on the duration of the attacks, on the entire duration of the disease, or, consequently, on the resisting powers of individuals.

Nor do post mortem examinations present any constant appearances. The dissection of a gouty patient is a rare and valuable thing, for gout commonly attacks the rich ones of the earth, whose relatives do not very readily allow them to be handed over to the anatomist. I had an opportunity of dissecting one last year, and found in his joints all the different degrees of phlegmasia, and there was scarcely one of them that was not either inflamed or sub-inflamed. In the larger ones I met with phlegmons and suppurations; in the cellular tissue, with indurations and fatty degenerations; the cartilages worn and reduced to a pulp; the tendinous and articular capsules inflamed or destroyed; the bones red and injected, some of them carious and their cartilages softened; the subcutaneous tissues, and the external surfaces of the ligaments encrusted with calcareous concretions, or covered with a concrete, gummy, and gelatinous matter. In places where the inflammation had been recent, a redness that attested its last traces was observed, and those where it had just appeared, only a detritus of tissues was remarked. There were bones, particularly of the foot, that had been so worn by the inflammation, that they ended in a sharp point. I also verified what M. Gendrin states, namely, that they do not inflame, but soften into a pulp. In short, I ascertained the existence of all the disorders that are producible on our tissues by acute and chronic inflammations, and inveterate sub-inflammations.

All these facts I examined the more attentively, as there are physicians that have contested them, making gout an almost metaphysical entity. Yet what can be more material? If we will subtilise and look at such facts, only with mental vision, the doctrine alike, and the practice of medicine, is impossible. In medicine at least, we must be materialists—not however, anatomo-patholo-

gists, who only search for disordered tissues, and have no sight for the vital modifications they produce—but anatomo-physiologists, who take into account at once the structure of the organs, and their vitality, and who do not consider these disorders to be the cause of gout, but the effects of an inflammatory or sub-inflammatory irritation usually denominated gout.

In the viscera of this same individual I found a most decided duodenitis, the lungs disorganized, rugous, filled with black tubercles, yellow and degenerated tissue of the liver, brown and black spots of the intestines, with softening and infiltration of their membranes, serum effused in the abdomen: but there was no alteration of the heart, though the coincidence of aneurisms of that organ with gout are common, and I have most generally observed them in other cases. There was also a decided encephalic congestion; not that the gouty matter had fixed itself in the brain and its meninges by choice, or some inexplicable cause, but that a true inflammation caused by transfer of irritation obtained in the organ in question.

Being now made acquainted with the phenomena of gout, its progress, and the disorders* that accompany it, we will proceed to speak of the mechanism of the disease or the manner in which it is developed.

Formerly all articular phlegmasiæ were confounded in the name of podagra. Then came the great distinction, grounded on the etiologic condition of cold, which, while it was admitted for arthritis, was disallowed, or neglected for gout, to which the name *podagra* was given, because it affected the feet in preference, whereas, arthritis manifests itself in all the articulations. I made you sensible of the difference between those two affections, when I told you that the latter was an acute phlegmasia, developed by the influence of cold, in all circumstances of life, but more especially in youth, and that the former was likewise an articular phlegmasia, but less acute in character, and accompanied by less violent pain in the commencement, appearing generally in advanced age, but possible at any time, and capable of being generated by cold alone. I added, that arthritis was to gout what acute gastro-enteritis was to chronic gastro-enteritis, so that after several attacks of one, we are only liable to suffer from the other.

* Broussais uses this term for the most part to signify the alterations of structure that occur in the tissues during the progress of disease: it might be supposed to mean the symptoms, were it not that he commonly speaks of the *phenomena* of the malady in the same sentence with the disorders.—J. M. G.

Referring to authors, we see that some of them admit a corruption of the humours, or of the earthy matters which chose, nobody knows why or how, the joints for an eliminating point; that others say that it is the detritus of the bones or calcareous salts, dissolved by an acid that flows with the blood, which nature directed upon certain parts: that others attribute the disease to a debility manifested by pains: that others again maintain it is purely nervous, and that there are those who believe it consists in a lymphatic inflammation, though it is impossible to imagine all the phenomena of gout springing from such a cause, for if it be lymphatic everything depending upon it should likewise be so. When it had made some progress they said it was a gouty cachexia, that the gouty humour or matter was predominant, that it was deposited in the viscera, the head, the chest, the belly, that it sometimes had a tendency to deposition in the skin, until we could see it exude, in a calcareous form, from different parts of the body. It has even been asserted that this calcareous matter was secreted by the lungs, and that gouty patients actually expectorated matter that changed into plaster. These plaster-like matters were also said to abound in the urine; and as many gouty subjects are affected simultaneously with nephritis and cystitis, all kinds of internal phlegmasiæ are possible in this disease. The latter were attributed to a superabundance of the matter that had been detached from the bones, and directed upon the urinary passages. Then the chemists, taking these facts as constant, explained them scientifically; for remember that their theory is nothing more than the chemical interpretation of the humoral expression as it was presented to them. They said that the bony matter was displaced and transported to various situations, and that it became so superabundant as to surcharge the humours and the economy at large with calcareous and phosphated substances, which encrusted and petrified the organs, just as if they had been kept in petrifying waters. Read Barthez' work; he has crammed all the tissues with gouty matter, and this is the only idea you can draw from it. On the other hand, when people have talked to you about a lymphatic inflammation, producing gout, they talk to you of an unintelligible thing, and still more unintelligible when they make an entity of it. But all this, or any part of it, you cannot see in gout; but you can see successive or simultaneous inflammations and sub-inflammations of the joints, complicated with various shades of irritation in the interior of the body, and leading to the disorganization of the viscera and articulations. If you ask why there is disorganization when there is phlegmasia, I cannot reply: I confine myself to the examination of facts, and do not pretend to rise to first causes.

In the prognosis, we say that the first attacks of gout are not dangerous; and that as the inflammation is less extensive than in arthritis, there is less danger than in it. The serious nature of the disease is proportionate to the intensity of the phlegmasia, which may, when great, cause phlegmon, or even gangrene, or give rise to articular dropsy; and, when obstinate and frequently repeated, encrust the joints, soften the cartilages, wear away the ends of the bones, and render the patient powerless. Generally speaking, whenever a second attack of gout comes on before the first is passed, and resolution completed, the patients are incessantly in a state of suffering, and there is reason to fear for the integrity of their joints.

The viscera are but slightly affected in the commencement, unless the disease makes rapid progress, and reaches the large articulations. In youth, they often remain altogether unaffected. So long as gouty people are well internally, we may in general promise them a long life; I say in general, because the internal affection is sometimes unexpectedly developed: in fact, with a regular gouty attack, they are liable to be all at once made sensible of the displacement of the irritation, by the presence of dyspnoea, vertigo, cerebral congestion, and apoplexy. But such is not ordinarily the case in the early periods, when the individual is vigorous, and is within his fifty-fifth or sixtieth year. Between seventy and eighty years the thing is changed, and every attack of gout is to be feared. It is a general rule, that so long as there is purely and simply an articular inflammation, there is nothing to fear; that can only be founded on some internal phlegmasia, to which the untoward chances are always proportioned.

What are the foundations of our therapeia in this disease? Let us first examine the old practice. Those physicians who beheld a depurative movement in gout, were unwilling that its progress should be stayed, left their patients to suffering, bled them a little, and contented themselves with the administration of sedatives. Those who beheld nothing but debility in it, gave stimulants. Those who thought they were assisting nature, gave sudorifics. Others were desirous of evacuating the humours by purgatives. These kinds of practice were all derived from different theories; but empiricism, which admits no theory, has also its own means: some employed leeches, others had recourse to ice, these used purgatives, those stimulants—specifics, such, for instance, as the preparations of meadow saffron: some again, made use of topical applications of poultices, while others contrived to gorge their patients with water, Cadet de Vaux prescribing as much as forty tumblers in twenty-four hours, which sometimes produced enormous evacuations, and an ill-timed revulsion. Of the specific re-

medies, the alcoholic tincture of colchicum has the greatest celebrity, and I have proved its effects. It first causes a powerful stimulation of the stomach, that quickly induces fever, and subsequently brings on a forced action of the secretory organs, and more especially a copious sweat; generally speaking, gout is thereby relieved.

Reflecting on these different plans, we at once perceive the viciousness of that which consists in leaving nature to mature the inflammatory phenomena until a depuration is effected, inasmuch as it allows the gout to become established; we perceive that the purely cooling plan has the inconvenience of staying the phlegmasia without having previously prepared the internal parts for the change, and that of Pradier—the blistering poultices—often fails; and, by causing a too copious exudation of fluids, produces emaciation of the extremities, leaves the patients exceedingly weak, and sometimes induces so much pain, and so violent a congestion, as eventually to determine gangrene. All these methods ought to be abandoned; at least I will not adopt any of them. The plan I pursue is rational, and consists in extinguishing the inflammation, by leeches, wherever it is developed, as in arthritis, in repeating their application until the disease is got under, and in seconding their effects by emollients, either alone or combined with narcotics, without having any fear of relaxing effects. Should it re-appear elsewhere, I still follow it: if it at the same time exists in the viscera, I also attack it in the viscera. But as in the latter locality it is frequently only consecutive, the irritation also frequently disappears with the external phlegmasia. After this, in order to prevent its return, I endeavour to ward off the two chief causes that might induce a relapse, namely, cold and gastro-duodenal irritation. The importance of this is strikingly illustrated by the fact of gouty patients having so often lost all their gout in getting rid of their wealth, and again becoming gouty when fortune once more smiles upon them, and good cheer warms them. The same remark is verified in persons labouring under nephritis and gravel.

When the attacks become more frequent, they should always be combatted in the same manner. If they come so closely on each other as not to allow time for resolution, and lymphatic effusions remain behind, the case becomes serious, and involves the necessity of uniting the most absolute rest with antiphlogistics, and mild diet, and of producing revulsions at certain distances, until the inflammation is extinguished. If you are called when there is a simultaneous attack of different degrees of phlegmasia and sub-inflammations of all the articular tissues, of the skin, cellular texture, ligaments, capsules, &c., and a purulent collection is already forming, the difficulties of

circumference, and in colour and inequality of surface, appearing to be composed of a number of distinct prominent granules; it bore a strong resemblance to a raspberry.

The deep red colour of the fungus arose from its great vascularity. It bled on being slightly touched, but was scarcely painful; pressed firmly, it diminished for the time in size, giving a sensation to the finger as if it were of a spongy or erectile tissue. There was a very narrow inflamed edge on the skin around its base, but not the least hardness either around or underneath it. The absence of hardness even underneath could be satisfactorily ascertained by examining it through the lip from within the mouth. The little fellow could give no account of its origin, except that about five or six weeks back he first noticed it small in size, and that it gradually increased to its present bulk. What is wanting in the history of the growth and progress of the disease in this case, I can however supply from another lately under my care, and from which I took the casts which I shew you, representing the disease in all its stages (*coloured casts were exhibited*). The first appearance of the disease is as a small eminence resembling a papule of a red colour, not so large as a flea bite, the surface of which slightly projects, and is smooth and glistening, the cuticle over it becoming thin and falling off. The little elevated spot continuing to grow in size, secretes no more cuticle, but becomes more and more vascular, and grows unequal on its surface until it resembles, as already described, a raspberry; it then assumes the appearance of a fungus, and from its surface, instead of cuticle, exudes or secretes copiously a creamy-looking pus.

This purulent exudation, if allowed to accumulate, forms a scab of varying thickness and colour; when of recent formation, the scale is simply the purulent exudation dried, and it is a dirty white, adhering very closely to the surface which has secreted it. In this state, with a thin layer of greyish purulent matter dried over it, the subjacent fungus gives to the touch a feeling of elasticity, such as would be given by a collection of matter. If the scab however be allowed to remain undisturbed for several days, it becomes thickened by successive layers of purulent matter from beneath, and on its outer surface becomes, like most scabs, formed in pustular diseases of a greenish hue. The scab is then liable to be torn off by a very slight touch, for between it and the fungus underneath there is an intermediate layer of purulent exudation. These casts show accurately the appearance at different stages. The smaller shews the disease in its commencement resembling a papule; the second shews the fungus covered with its greenish scab, through which points of the purulent matter from underneath are forcing their way; the third shews the appearance of the raspberry

fungus denuded of its scab, smeared over with its creamy purulent exudation, and dots of blood oozing through the pus, caused by the slight violence done to the prominent points of the granules in tearing off the scab. *An accurate examination shews that the fungus is not a new tissue, but that it is formed of the vascular papillæ of the skin itself hypertrophied, and by their growth and union producing the peculiar granular aspect.* This disease attacks all parts of the skin, but I have seen it most often on the inside of the thighs, on the hams, on the inside of the arms, and on the scrotum. I have seen the scrotum, buttocks, and inside of the thighs, thickly covered with the fungous growths, and in that case the subject of it was positive in his assertion that he was inoculated by the disease from second-hand clothing.

In the country parts of Ireland, where the disease is endemic, there is no doubt entertained of its being contagious. In the case from which the casts before you were taken, the patient said he never had any symptom of the disease, until he lay in the same bed with a man who had a similar eruption. That man I had an opportunity of seeing, and the only eruption on him was a crop of venereal condylomata around the anus. If the history of the conveyance of the disease in this instance be correct, it would tend to establish that this singular fungoid disease is one of the many protean forms of syphilis. Of the duration of "button scurvy," I can say nothing positive. I have known it to last for several months; and when apparently cured in one place, shew itself, after a short interval, in some other.

The diagnosis of this eruption is easy. I know of none indeed (in these countries, so plainly distinctive are its characters), with which it could be confounded, unless from great carelessness. When first presented for observation, the prominence of the scabs might make it bear some resemblance to rupia, but even in colour there is a distinction, for the scab of rupia is blackish, while that of the disease now before us is dark green. And in the scab alone, all the similarity consists; for if the scab of rupia be removed, there is left a depression, the prominence being caused altogether by the thickness of the scab, while the removal of the scab of "button scurvy" exposes the fungus, already described, projecting above the surface of the skin. The situation of the disease, in the present instance, on the lip, and the deformity occasioned by it, might at first cause some alarm, from a suspicion of the affection being malignant, but the absence of hardness, of lancinating pain, and of ulceration, is sufficient to remove all fear. The treatment of the disease, as exemplified in the case before us, is simple, and the same as that employed from time immemorial in the country parts of Ireland—namely, the exhibition of mercury pushed so far as to salivate.

The popular preparation is the bichloride or sublimate. The particular preparation used seems to be a matter of no consequence. I used the common blue pill. I allowed the case to remain for several days without any treatment, to shew you the disease, and then put the boy on the blue pill. As soon as the mouth became slightly affected, the fungus began to wither, and in a few days shrunk to the surface of the skin from which it had grown. Almost any slightly stimulant local application, a weak solution of nitrate of silver, of corrosive sublimate, or of sulphate of copper, will destroy any of the fungi, but the disease will break out somewhere else, unless it be treated by medicine acting through the constitution.

In concluding my observations on this subject, I may direct your attention to the singular resemblance which exists between the disease now before us, and *frambæsia* or yaws. *Frambæsia* or yaws has been supposed by some to be a variety of the leprosy of the East; and if so, the persistence to the present time of a similar disease in Ireland—and in Ireland, I believe, alone, of the countries of Europe, may afford more than a fanciful support to the supposition of the eastern descent of the ancient inhabitants of Ireland, a supposition so strongly supported by the antiquities, the customs, the remnants of eastern rites, and even the names of places still preserved in this country. I call your attention to this similarity in the hope, that, should it fall to the lot of any of you to see *frambæsia*, you may be induced, perhaps, to give—what is very much wanted—an accurate account of that disease. At present, the description of it is confusion itself; for by one, *frambæsia* is described as commencing with a papule; by another, with a pustule; by a third, as being a tubercle. I shall notice, as well as these loose and imperfect descriptions will enable me, the points of dissimilarity and of resemblance which exist between *frambæsia*, or yaws, and the button scurvy of Ireland. I should first, perhaps, observe, for the purpose of preventing still further confusion than what already exists in the descriptions of *frambæsia*, or yaws, that Dr. Thomson has confounded yaws with sibbens, or sivvens, a totally different disease, the latter being a form of secondary syphilis, and attacking the throat, bones of the nose, &c.

I may first notice the points on which *frambæsia* and button scurvy differ from one another. The skin is described, by Bateman, on the authority of Dr. Winterbottom, as presenting the appearance of being dusted over with flour previously to the breaking out of the eruption. I have never seen this precursory state of the skin in button scurvy. Biett states that around the fungoid growth of yaws, the skin and subterraneous tissue grow callous; there is no hardening of the surrounding tissue in button scurvy; but on

this point of dissimilarity little stress can be laid, as Biett acknowledges that he saw but one case of the disease; and this callosity is not noticed by any other writer. In the history of the progress of the disease, all writers state, that there appears, after the ordinary eruption of yaws has been out for some time, a tumour, larger than the others, to which the name of mother pain, or mother yaw, has been given; and the existence of this larger tumour—if the account given of it be correct—constitutes the most marked difference between the button scurvy of Ireland, the yaws of Africa, and the Indies. The description of the mother yaw, or mama pain is, however, unsatisfactory; and it seems, from the description given of it, to be nothing more than a spot of *ecthyma cachecticum*, shewing itself in a broken down constitution. It is described as an unhealthy depressed ulcer, corroding the parts around, and requiring the same mode of treatment as *ecthyma cachecticum*. It wants elevation; and wants, therefore, the most striking character of yaws.

I have fairly put the points of dissimilarity between the two diseases; I shall now mention the points of resemblance which exist between yaws and our button scurvy, and they are very marked.

Yaws is described as "increasing gradually from specks to the size of a raspberry;" and this, as you may remember from my description, and observe from the casts before us, and from the case, is the progress of button scurvy. There are no constitutional symptoms, of any consequence, precursory to the eruption in either disease. When the fungoid excrescences of yaws have shot up above the skin, they are described as "not possessed of much sensibility," and as "bleeding on the slightest touch." These are remarkable features in the fungous growths of the button scurvy; both diseases are communicated by contagion—and both diseases may exist for an indefinite time. And lastly, though not least in importance, in my opinion, is the singular resemblance to the fruit of the mulberry presented in both diseases, the fungus and the fruit similarly constituted of distinct granules—an appearance observed in no diseases of the skin, except these two. Finally, the description of yaws, as given by Biett, would answer so accurately for a description of button scurvy, that I cannot forbear reading it for you to complete the picture of resemblance. "Yaws shows itself by small spots of a dark red, similar to flea-bites, usually in groups. Each of these spots become the seat of a small elevation, at first resembling a papule; the epidermis then peels off in a slight exfoliation, the elevations become more prominent, and there is then a surface of varying extent, bristled with vegetations, united at their bases, the points distinct, of a pale red, and not painful. They resemble strawberries or mulberries. The

disease appears to consist not of new growths, but of the true skin itself hypertrophied and divided into a multitude of vegetations."

I am far from presuming, however, to say that the two diseases are the same: my knowledge of either is not sufficient to support me in such an assertion, but the resemblance between them is very strong; while there is no other skin disease to which either bears the slightest similitude.

Mr. Wallace has published an account of two or three cases of this disease in the Medico-Chirurgical Transactions. He has given the name of morulus to it, from the resemblance of the fungus to a mulberry. His description of the disease is exceedingly accurate; but the plate of the disease, which accompanies the description, is execrable.

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DR. GÖLIS ON THE TREATMENT OF THE DISEASES OF CHILDREN.

Dropsies—Chronic Hydrocephalus.—It is sufficient to have seen one hydrocephalic child, to have a just notion of their physiognomy. These patients are generally known at first by a heavy and awkward manner of walking; they are apt to trip and fall, and often cross their feet. They like to have something continually in their mouth and fingers; they also put their fingers into their nose and ears; and their eyes are convulsed; this is a never-failing symptom.

If a cough accidentally occurs in the course of chronic hydrocephalus, it easily changes into fits of periodic suffocation, which has been treated of above. If the disease passes into an acute form the children soon die.

In the treatment, calomel is the chief remedy. Children under a year old take first of all an eighth of a grain, and afterwards a quarter of a grain, twice a day. At the same time their head is rubbed with equal parts of mercurial and juniper ointment, taking care to keep it warmly covered.

As far as the treatment is concerned, the most essential point in the diagnosis of chronic hydrocephalus, is to ascertain whether or not the disease is complicated with cachexy. When there is cachexy there is generally also some organic disease, as of the spleen for example, or some engorgement; and it is in such a case that calomel is the sovereign remedy, particularly if the bowels are confined. Besides the use of calomel, the hypogastric and splenic regions are rubbed with the ointment mentioned above. But we must never omit to treat the cachexy at the same time. Dr. Gölis combats it with bark. One or two drachms of cinchona are to be boiled for a quarter of an hour, and eight grains of salop then added. The boiling is then to be continued for another quarter of an hour, so that the decoction when strained may amount to four ounces, and half an ounce of syrup of

poppies is then to be added; the dose is a teaspoonful every hour.

In a case of semi-paralysis, the consequence of chronic hydrocephalus, Dr. Gölis prescribed arnica in the following form: *Rx.* Inf. glycyrr. et decoct. emoll. \mathfrak{z} ij; Extr. arnicæ gr. iv; Oxym. scillæ, \mathfrak{z} ij.

Partial External Hydrocephalus.—This disease, which is also called œdema of the scalp, is cured to a certainty by the occasional application of a caustic to one of the œdematous points; the best is lunar caustic. The absorbing power of the lymphatics is excited by this kind of irritation. Dr. Gölis generally moistens the swelling, and then touches it in several places with the nitrate of silver; and if the result is not satisfactory at the end of a few days, he has recourse to caustic potash, of which he takes a few frustula, and applies them to various points by means of adhesive plasters. Lastly, it is right to keep up a uniform temperature by means of bags filled with aromatics.

If the œdema is confined to a small spot, it may be opened; but this would be dangerous if the case were complicated with internal hydrocephalus.

In a case where œdema of the scalp had followed the suppression of a porrigo, we saw Dr. Gölis administer calomel, perhaps with the intention of preventing a dropsy of the ventricles of the brain.

Hydrorachis.—This disease is characterized by a peculiarity in the walk of children affected by it: they totter as they go; at each step they turn their feet inwards, and always put the heel to the ground first. These peculiarities increase from day to day, and the little patients end by being unable to walk alone, and their gait always retains the characteristics which we have pointed out. Hydrorachis is most usually the result of myelitis, (inflammation of the spinal marrow). Calomel is the principal remedy, to which are added blisters to the loins.

Ascites.—In this species of dropsy Dr. Gölis gives three doses of cream of tartar a day, together with the following potion: *Rx.* Inf. Glycyrr.; Aq. fœnic. aa \mathfrak{z} ij; Extr. amari gr. xij; Sp. Æther. nitr. gtt. xv; Oxym. simpl. \mathfrak{z} ss. At the same time he orders the abdomen to be rubbed with a mixture of mercurial and juniper ointment.

He also prescribes the following potion: *Rx.* Inf. glycyrr.; Aq. fœnic. aa \mathfrak{z} ij; Potassæ subcarb. gr. iss; Aceti scillæ, \mathfrak{z} iss; Laud. sydenh. gtt. ij. When worms are present at the same time he prescribes: *Rx.* Aq. fœniculi, \mathfrak{z} iv; Extr. scillæ, gr. j; Camph. gr. iss; Syr. fœnic. \mathfrak{z} iv. And when the dropsy is complicated with scrofula, *Rx.* Inf. glycyrr.; Decoct. emoll. aa \mathfrak{z} ij; Extr. conii, gr. viij; Potass. acet. liquidæ, \mathfrak{z} iss; Oxym. scillæ, \mathfrak{z} ij. The dose to be a teaspoonful every hour.

Scrofulous Diseases.—Whether the scrofulous disease be in its commencement, or al-

ready established, Dr. Gölis always gives the following powder, after having first alleviated the most urgent accessory symptoms: *Rx.* Test. præp. $\frac{3}{4}$ ss; Guaiaci resinæ; Limaturæ ferri, aa $\frac{3}{4}$ ss; Sacchari albi, $\frac{3}{4}$ iij. The dose of this powder is a pinch (greater or smaller, according to the age of the child), taken twice a day.

Such is the powder which Dr. Gölis prescribes at the hospital. In private practice he substitutes his anti-hectic scrofulous powder, which is made of equal parts of laurel berries, nutmeg, and hartshorn shavings. But the berries must first be deprived of their acrimony, which is done by baking them in bread. The antihectic scrofulous powder is then administered, with equal parts of liquorice powder, in the dose of a large pinch three times a day, or in the following form: *Rx.* Pulv. antihect. scrof. Gölis, ij (vel plus); Guaiaci resinæ; Limaturæ ferri, aa $\frac{3}{4}$ ss; Sacchari albi, $\frac{3}{4}$ ij. All these powders may be continued for a length of time; but whenever any inflammatory disposition exists, the resin of guaiac is omitted. In addition, the children are to have a bran bath three times a week. The diet consists of broth and milk.

Scrofulous Exanthema.—In this case Dr. Gölis gives his ordinary powder, taking care, however, to substitute a scruple of antimonial æthiops (sulphuret of mercury and antimony) for the iron filings; and giving, at the same time, wild pansy tea for drink. If there is a syphilitic taint, instead of the iron filings he gives the black sulphuret of mercury.

Scrofulous Eruptions of the Head.—(Achores Scrofulosi). No particular remedy is employed against eruptions of this kind; on the contrary, it is well that they appear, for the scrofulous disease is terminated the sooner. If an eruption on the scalp dries up quickly, the neighbouring glands are apt to swell and ultimately suppurate. There is a close connexion between the abdominal glands and the head; an eruption on the latter often disperses the engorgement and induration of the abdominal glands; and these glandular affections may sometimes be cured by producing an artificial eruption on the head, by means either of powdered cantharides, or by the greyish dust which is obtained by currying horses.

Bony Tumours of a Scrofulous Nature.—Tumours of this kind are principally observed on the fingers and toes, and sometimes on the feet and arms. The tumour grows larger, becomes round and red, and ultimately opens. It is then seen that the bone is carious. Sequestra comes away by degrees, and whole phalanges may be destroyed. Nevertheless, the disease gets well, but slowly, in eighteen months or two years. The limbs, though shortened, can again be employed. We must carefully abstain from stimulating treatment when we have to do with ulcers arising from scrofulous caries; local stimulants would merely aggravate the disease. The best re-

medies are emollient fomentations, cataplasms, and bran baths; and the medicines recommended against scrofula are to be employed internally, and also coltsfoot tea. This method often succeeds extremely well.

When it is a simple scrofulous ulcer, Dr. Gölis generally orders it to be sprinkled with equal parts of powdered rhubarb and powdered charcoal, and sometimes with the latter alone; and for the lotions he uses an infusion of scordium (Teucrium Scordium).

If scrofulous tumours appear behind the ear, they must be opened as soon as possible, as they quickly cause caries of the mastoid process.

Otorrhœa.—This flux almost always depends on a scrofulous taint, and must be treated accordingly. Externally nothing is to be used but a weak decoction of bran as a lotion; if caries exists, an infusion of mallow and scordium is to be employed as an injection. Styptic remedies, used with the intention of stopping the discharge, might easily produce hydrocephalus.

Subcutaneous Lymphatic Tumours.—Tumours of this kind soon yield to the employment of the nitrate of silver, with which they are touched in the manner mentioned, when treating of partial external hydrocephalus. Besides this, caustic emollient fomentations are used. If cachexia or slow fever exists, these affections are separately treated. (See *Slow Fever* afterwards). When the tumours are opened, if they look ill they are sprinkled with a mixture of fine-powdered rhubarb and charcoal, as in the case of scrofulous ulcers.

Sanguineous Tumours of the Head.—Dr. Gölis recommends us not to open these tumours when met with in new-born children, and asserts that children often die in consequence of such an operation. He touches them with lunar caustic, like lymphatic tumours and œdema of the scalp; and asserts that they easily yield to this remedy. He also employs the same method in cases of nævi materni, and removes them by thus exciting suppuration.

Rickets.—This disease is sometimes ushered in by a state of weakness before there is any visible deformity of the osseous system. The children neither can nor will go upon their feet; and they cry and groan when lifted; this is the first stage of the disease. At a later period the patients begin to breathe with difficulty; and they are often seized with fits of periodic suffocation. They perspire abundantly, especially about the head: the state of rickets has now begun.

Rickety children have a peculiar manner of holding up their legs when they are lying at ease upon their back. They keep them crossed and draw them up, so as to enclose the abdomen between the thighs. Their urine has a specific odour—that of mice; their weeping and cries have something characteristic, when the disease is fairly established; and an experienced ear may always

guess the disease by this sign alone. They are seldom thirsty, even when suffering from an inflammatory fever, with or without local affection. Their head is frequently very large, besides the deformity which often occurs in this part, and they have generally more capacity than other children. It is very seldom indeed, that they are affected with hydrocephalus.

Some rickety children, in spite of their disease, present the aspect of health; this is *rachitis florida*. Such children are usually of a scrofulous habit, and in them the malady probably originates from a real want of osseous matter. The treatment is the same in this case; but the prognosis is more favourable and the little patients are sometimes quickly cured in spring or summer. Before beginning the treatment, all the accessory symptoms, such as cough, diarrhoea, &c. must of course be removed; and Dr. Gölis then generally prescribes the following powder with the best results. \mathcal{R} . Testarum præpar. \mathfrak{z} ss; Ferri limaturæ, \mathfrak{z} ss; Sacchari albi, \mathfrak{z} ij.

The dose is a pinch morning and evening. A bath of hay flowers is to be taken at the same time, three times a week. The diet consists of acorn coffee, with milk, once or twice a day, broth, and meat; farinaceous food is forbidden. He does not allow them to sit, or to be much carried in arms; the horizontal position is the best, but they must not lie on feather-beds.

It is an error, according to Dr. Gölis, to suppose that the oxides of iron are borne more easily than the filings. He has never succeeded with madder in the cure of rickets, even when he has used it with great perseverance. The most troublesome complication of this disease is whooping-cough.

Chronic Tension of the Skin (*Cutis tensa chronica*).—This disease, though not very rare, is not at all known; it is characterized by a peculiar tension, of a shining red, of the skin of the face, particularly around the mouth; or of the hollow of the hands, the soles of the feet, and the upper and interior part of the thighs. By degrees the stretched parts become harder and wrinkled; the lips become covered with crusts, which sometimes extend to the cheeks, and under these crusts there is an acrid humour, which corrodes the flesh in patches. Ulcerations also form on the thighs, around the genitals, on the soles of the feet, and on the hands.

This disease usually depends on a syphilitic taint, and the treatment is perfectly in accordance with this theory; calomel is the only remedy, the specific. Dr. Gölis prescribes it in the dose of a quarter or a third of a grain, according to the child's age, three times a day. He gives a decoction of wild tansy in milk for drink, and orders a bran bath occasionally. The disease, however, is rarely, if ever, cured without leaving traces behind, especially about the mouth. Caries,

or some other disease of the osseous system, is a frequent consequence. In less serious cases the disease degenerates into a crusta lactea.

Blue Fever (*Febris cærulea*).—The disease, which Dr. Gölis designates by this name, is an affection *sui generis*, that has not yet been described, and must not be confounded with the *morbis cæculus*, which is caused by a disease of the heart. It occurs only in children between four and twelve months old, and usually among those of the poor, who are fed on coarse farinaceous food, and live in damp unwholesome dwellings. The disease occurs in paroxysms only; the children turn blue suddenly, their breathing is painful, their pulse, small, hard, and spasmodic. The paroxysm lasts for some time, disappears, and returns again; but the intervals are shorter from day to day, and at last the paroxysms become continuous. The skin is often covered with clammy perspiration, and death takes place suddenly. On inspection, the vessels are found gorged with blood. With the exception of the fever, which accompanies the paroxysms, the disease has all the characters of a neurosis, and the medicines from which Dr. Gölis has derived most advantage, are the succinate of ammonia and other antispasmodics, combined with mucilaginous remedies. Here is his formula: \mathcal{R} . Aq. anthemidis, \mathfrak{z} ij; Ammon. succin. liquid. gtt. vj; Laud. sydenhami, gtt. j; Tr. castorei gtt. vj; Mucil. acaciæ; Syrupi papav. aa \mathfrak{z} ss. The dose is a teaspoonful every hour. In addition to the internal remedies, he orders tepid alkaline baths, half a gallon of ley being added to a bath.

When the spasm is relieved, it is proper to give calomel as a purgative, or a mixture of rhubarb and magnesia.

Children, moreover, are subject to a particular chronic sweating, which is not the disease called by the French *la sueur*, because it is unaccompanied by fever. Here the skin becomes blueish, and, as it were, transparent. This may be combated, according to Dr. Gölis, by the administration of a light infusion of bark and milk, and frictions, with almond oil, repeated several times a day.

Slow Fever.—Slow or hectic fever is, as every one knows, the result of very different diseases; emaciation of the neck is one of the first symptoms. Dr. Gölis here gives acorn coffee, or a decoction made by boiling one or two drachms of cinchona for a few minutes, and then adding eight grains of salop. This is again boiled for a few minutes, so that the strained liquor may amount to four ounces, and then half an ounce of syrup of poppies is added. The dose is a teaspoonful every hour. According to circumstances he orders the following ointment: \mathcal{R} . Ung. althææ, \mathfrak{z} ss; Ung. Hydr. \mathfrak{z} ij; M.

A piece, the size of a haricot bean, is to be rubbed upon the abdomen morning and even-

ing. In the morning, the children have acorn coffee; at noon and in the evening, a panada, with the yoke of an egg or ground rice. When the hectic fever is in an advanced stage, and is accompanied by diarrhoea, Dr. Gölis prescribes as follows: *Rx.* Decoct. althææ rad; Inf. Glycyrr. aa \mathfrak{z} ij; Laud. sydenhami gtt. ij; Ammon. succin. liquid. gtt. xv. Sometimes, also, an equal quantity of rue water is substituted for the decoction of mallow.

On the following formula is prescribed: *Rx.* Aq. tilis flor. \mathfrak{z} ij; Mucil. acaciæ, \mathfrak{z} ij; Ammon. succin. liquid. gtt. xv; Syr. papav. \mathfrak{z} ss; M. The dose to be a teaspoonful every hour.

When scrofulous children are attacked by hectic fever, the disease terminates in hydrocephalus six times out of seven.

Intermittent Fever.—Dr. Gölis often treats this disease with perfect success, by giving fifteen grains of powdered oyster shells alone, three times a day. He also prescribes: *Rx.* Inf. glycyrr; Decoct. althææ, aa \mathfrak{z} j; ad \mathfrak{z} ij; Ammon. muriatis, \mathfrak{D} ss; Extr. taraxaci, \mathfrak{z} j; M. Sum. coch. j max. 2 horâ.

If the case is complicated with visceral engorgemens, he uses frictions with equal parts of ung. nervinum, and mercurial ointment.

NEUROSES.—*Convulsions of new-born Children.*—These convulsions are usually caused by cerebral irritation; and Dr. Gölis always opposes the use of stimulating antispasmodics, which, he says, only aggravate the disease. Antiphlogistics alone are suitable, namely, calomel in small doses, baths, and emollient clysters.

Catalepsy.—The author of this article saw but one case of catalepsy while attending Dr. Gölis's practice, and this case was complicated with worms. After a mild aperient, calomel was administered in combination with valerian.

Epilepsy.—In a case of epilepsy, Dr. Gölis prescribed as follows: *Rx.* Test. præp. pulv. \mathfrak{z} ss; Valer. rad. pulv.; Ferri limaturæ, aa \mathfrak{z} ss; Sacchari albi, \mathfrak{z} iij. The dose to be two or three pinches a day.

Trismus.—Dr. Gölis has never been able to save a new-born infant attacked with this disease.

DISEASES OF THE SKIN.—*Scarlatina.*—Dr. Gölis's treatment changes according to the character of the fever. When the eruption comes out but imperfectly, the body is ordered to be washed with tepid water. Dr. Gölis extols this proceeding extremely, and never substitutes diaphoretics for it in the beginning, as they might prove injurious.

Measles.—When scrofulous children are attacked with this disease, it is apt to give rise to hectic fever. Measles, like scarlatina, must be treated according to the character of the fever and other circumstances, sometimes by antiphlogistics, and sometimes diaphoretics. The following is Dr. Gölis's diapho-

retic prescription in this case: *Rx.* Aq. tilis flor. \mathfrak{z} iij; Liq. ammon. acet. \mathfrak{z} j; Syr althææ, \mathfrak{z} ss.

Tinea Capitis (Porrigo).—Tinea, like the crusta lactea and herpes, is frequently of a scrofulous origin; for as the scrofulous virus produces the crusta lactea on the face, so it causes tinea on the head, and herpes on the body. It is worthy of remark, that if a well-dried porriginous crust is powdered, and another person is rubbed with this powder on any part of his body, the spot thus rubbed becomes covered with an eruption.

The internal treatment of porrigo is that which is suited to the scrofulous affection. A decoction of wild tansy in milk is given for drink, and an ointment is rubbed on the dry crusts, consisting of fifteen grains of red precipitate to half an ounce of fresh butter. Emollient fomentations are used to soften the crusts, and make them fall off.

In a case of affection of the chest, arising from a suppressed porrigo, Dr. Gölis prescribed as follows: *Rx.* Test. præp. \mathfrak{z} ss; Gaiiaci resin. \mathfrak{z} ss.; Hydr. and antim. sulphureti, \mathfrak{D} j; Sacchari albi, \mathfrak{z} iij. A pinch to be taken morning and evening.

Crusta Lactea (Porrigo larvata).—In this eruption, Dr. Gölis always employs an anti-scrofulous treatment. In this, as in all other eruptions of a scrofulous nature, coltsfoot is to be preferred to the wild tansy. The crusta lactea sometimes changes to a serpiginous crust; but in such cases a syphilitic taint is always to be suspected.

Chronic Pemphigus.—An anti-scrofulous treatment is proper in this disease likewise.

Itch.—There is a species of itch, or rather of psoric disease, which is not contagious; it is often observed after vaccination. Scrofulous itch too is not infectious.

The antipsoric treatment of Dr. Gölis is as follows: internally he prescribes—*Rx.* Magnes. muriatis; Sacchari albi, aa \mathfrak{z} ij; Sulph. sublim. \mathfrak{z} j. Half a teaspoonful, or more, to be taken three times a day.

Coltsfoot tea is to be given as drink, and a mixture of sulphur ointment and soap is to be rubbed on externally. These frictions are to be performed twice a day, on the parts where there are no psoric pustules.

Intertrigo (Chafing).—The following is Dr. Gölis's method of treating this erythema, which occurs in children between the thighs and around the genitals. He foment the affected parts with the following mixture: *Rx.* Aq. calcis, lbss; Plumbi acet. gr. xv. At the same time, he endeavours to excite an eruption on the head by means of Garot's ointment. Internally, he administers calomel in the dose of a quarter or half of a grain, and gives wild tansy tea.

If the intertrigo is of a syphilitic nature, the fomentations are made with the yellow wash, consisting of a grain of corrosive sublimate to four ounces of lime water.

Aphthæ.—In this disease he prescribes

R. Mellis rosæ, ʒj; Boracis, gr. xv. M. This is to be applied to the affected parts four times a day.

The following formula is also used: **R.** Mellis rosæ, ʒj; Syr. mori, ʒss; Boracis, ʒss. When there is much inflammation of the mouth the borax is too irritating, and the honey alone should be used. We must never lose sight of the fever by which aphthæ may be accompanied. The salivation induced by the disease often causes dyspepsia, which is remedied by extract of dandelion dissolved in an aromatic water.

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Summary of Orfila's Observations on the changes which occur in the Tissues of Dead Bodies after Interment. Appended to Sédillot's Manuel de Médecine Légale. Translated from the French, for this Journal.

Epidermis.—The epidermis has a marked tendency to decomposition. At an early period it becomes thinner and softer, and adheres to the winding sheet, or to the earth, if the body has been interred naked. On the parts where it has not peeled off it is in folds, and is easily detached in thin translucent layers of a greyish white colour, even on the abdomen, where the cutis is of a green tinge; on the palms of the hands and soles of the feet it is drier, denser, white slightly tinged with yellow, rugose, much folded, and presents an appearance similar to that produced by the long application of an emollient poultice to the same part; occasionally its internal surface acquires a partial tinge of red or green, from the presence of a serous fluid, which may be removed by washing with water, and the white colour of the texture restored. There seems to be no regular succession in which the different parts of the body become denuded of their cuticle.

At a stage somewhat more advanced, the portions of epidermis not yet separated begin to undergo a remarkable alteration; they frequently become greasy, and still more adherent to the linen or the earth which covers them; they then form layers of a reddish yellow or brown colour, composed of numerous small lenticular and confluent elevations; sometimes instead of these layers we find a viscid fatty mucosity, by which certain parts become agglutinated with others—as for example, the inner part of the superior extremities with the thorax. Instead of this gluey cement, a dry substance, like the rind of stale cheese occasionally presents itself. These substances are sometimes covered with a white flocculent mould, in some instances resembling hoar frost. At last the cuticle altogether disappears; if, however, it has been elevated during life by serum effused beneath it, it may resist putrefaction and present its natural characters at the end of many months.

The Nails.—The nails are softened, lose their elasticity, and acquire a greyish hue; they become less and less translucent, and they may be easily plucked out even when the body has been buried only twenty or thirty days. At this period the cutis beneath them is smooth, humid, and of a vivid red; finally the nails dry up and fall off.

The Hair.—This strongly resists putrefaction; we have always found that it preserved its natural appearance, even several years after inhumation.

The Cutis.—After having separately noticed the epidermis, we proceed to examine the changes produced in the true skin, which we will suppose not to have been as yet deprived of its cuticle. At an early period it is of a yellowish colour, with a tinge of rose, presenting here and there tints of green, red, and violet; it is little softened, not at all corroded, and altogether nearly in its natural state. It is always moister at the posterior part of the trunk than anywhere else. Later than this, it is sometimes covered in certain portions of its surface with small sandy granulations, consisting of phosphate of lime. By the effect of putrefaction it is nearly detached at the back, where it forms a sort of pouch, as the skin of the toad does round the body of the animal; its thickness is not yet sensibly diminished, except in the eyelids, where it is easily torn; its structure is still perfectly recognised, and no part of it is transformed into fat. Later still, it begins to dry up, becomes thinner, and assumes a colour varying from a pale yellow to an orange, and sometimes a deep brown; it is covered with the cement we have already described when speaking of the epidermis, and at certain points with mould; the latter is scarcely to be found in the more humid parts, as the back, but is abundant in those which are dryer. Desiccation now makes daily progress; the integuments appear as if they were tanned, and when any part of the body is struck with the handle of a scalpel, it sounds like a band-box. When cut into, the skin resembles that of a piece of bacon, and an evident tendency to saponification is observed, especially where the subcutaneous cellular tissue is charged with fat; in parts where this is the case, the skin is generally best preserved, except around the anus, where it is easily accessible to worms. The adhesion of the skin to the subjacent parts varies; when it lies close to bones, the cellular membrane is dry and easily torn, but when it covers parts furnished with a fatty cellular tissue, or is attached to muscles, it adheres very firmly. In a still more advanced stage, the desiccation and attenuation of the skin increase in those parts where it has not been saponified, and, as formerly, the anterior parts are dryest; sometimes, indeed, the skin over these is very much dried, while on the posterior aspect of the body it is very moist, much attenuated, and partly destroyed by

worms. It assumes more and more of a brown colour, but generally preserves a moderately firm consistence, though corroded and destroyed at many points. The tissue becomes thinner and thinner, and at last gradually disappears. It is unnecessary to add, that its destruction is much more rapid in those parts which have neither been dried up nor converted into fat. It will doubtless be remarked that we have not included *cadaveric lividities*, *vergetures*, or *ecchymoses*, among the changes which the skin undergoes after inhumation. The cadaveric lividities generally appear when the body begins to grow cold, consequently long prior to inhumation; they have moreover been very fully described in our *Leçons de Médecine Légale*. Again, the *vergetures* are nothing but cadaveric lividities of the skin, traversed by lines, wrinkles, or white patches, evidently resulting from the pressure of the clothes, bandages, &c., on the livid parts; we have, therefore, not commented upon them; we have made no mention of *subcutaneous ecchymoses*, because we have never observed them in the bodies we have subjected to putrefaction; we do not, however, doubt their occasional occurrence in dead bodies after interment; on the contrary, every thing would lead us to expect their appearance in young persons who are fat, and abounding in moisture, who have died of an acute disease, and have been buried during the summer. These *ecchymoses* are most frequently seen in the most dependent parts, as the occiput and loins, or in the eye-lids and scrotum, where the subcutaneous tissue is lax and easily distended; they never present the different shades of yellow, reddish brown, and black, which are often observed in *ecchymoses* during life; their colour is generally uniform.

Subcutaneous Cellular Tissue.—This texture is little changed at an early period; nevertheless, a difference is soon observable between that on the anterior, and that on the posterior part of the body, and according to the thickness of the muscular layers with which it is connected. Thus, on the fore part of the trunk, and especially where the muscles are thin, as on the abdomen and middle of the thorax, it is not infiltrated, but dry, and of firm consistence, while on the back part it is infiltrated, soft, and easily lacerable: this infiltration may be simply sanguineous, or sanguineous and oily; in the latter case, little yellowish fatty drops are mixed with a red fluid. At the posterior part of the head and neck, and over the whole extent of the back and loins, the infiltration is more or less of a violet colour, and has a gelatinous appearance, resembling that of the epicranial cellular membrane in some new born children; the tissue is here tumid and easily torn. In the nates and back part of the limbs, the fluid is scarcely gelatinous, but flows much more readily from the cellular tissue; in the la-

teral regions of the thorax and abdomen, the infiltration is of a character intermediate between that on the anterior and posterior part of the trunk. On the fore part and sides of the thighs and arms, where the muscles are thick, the cellular membrane is moist, though not infiltrated, and easily torn, owing to the progress of putrefaction, which is more rapid here than in parts where the muscles are thinner.

Of course the infiltration will be greatest in the bodies of those affected with anasarca. In a more advanced stage, especially in fat subjects, the adipose membrane has a tendency to be transformed into a soap; it acquires a whitish or yellowish grey colour, is of the consistence of suet, and unctuous to the touch: wherever it is abundant, it presents, on being cut into, a porous and puffy appearance, occasioned by a number of small, empty pouches, the result of desiccation, or the disengagement of gas. Still later we have observed it dry, dense, white, or greyish, filamentous, and easily lacerable in parts where it contains little fat; but yellowish, offering little resistance, moist, and resembling lard that has been boiled and suffered to cool, in parts where it contains more fat: lastly, in the fattest parts it was of an orange colour, of a globular texture, and evidently saponified. The conversion of the adipose membrane into soap is by no means a constant phenomenon; we have found this tissue in its natural state in a thin person who had been buried six months, while in a fat woman who had been buried nearly the same time, and in the same soil, it was saponified in several parts. At a more advanced period, the cellular tissue which has not been saponified, assumes a brown hue, dries up, and disappears.

Muscular Tissue.—The changes in the muscles commence with softening; in general their red colour becomes paler where they are not much infiltrated, some, however, are of a violet hue, and those of the abdomen are often green: for some time their texture is easily to be recognized; they are not transformed into fat, unless it be in the orbits, where saponification appears to take place more readily than in other parts. Their colour is then green, or that of wine-lees; the first of these colours is much commoner than the second, which seldom exists, except when there is a sanguineous infiltration. The muscular tissue is throughout humid, except in the orbits, and in many parts it is infiltrated with a sero-sanguineous fluid, similar in colour to that found in the cellular membrane, and which is so abundant in certain regions, particularly in the back, that a large quantity escapes on pressure, and even on simple incision. Some of the muscles resemble a jelly, in the midst of which fleshy fibres appear, still so united as to preserve the form of the part; notwithstanding this infiltration, the muscles are diminished in vo-

lume, and their fibres dissolved as it were, in the liquid. At the anterior part of the limbs, the muscular substance forms a very thin layer on the bone which it covers; its consistence is generally considerably diminished, and it is lacerable in proportion to the degree of infiltration; as this is greatest at the posterior part of the trunk, and where the muscular layers are thickest, it is in these parts that the fibres are most easily torn. The muscular tissue, having been softened, and undergone the changes of colour above mentioned, is either saponified or destroyed. Saponification takes place especially in fat persons; the fibres become more and more blanched, and some are converted into a whitish soap, while the rest retain their rosy colour. We have never seen a muscle entirely transformed into fat; the other kind of alteration which leads to the destruction of the muscle is much more common: it happens in the following manner. After being softened, the muscular tissue gradually dries and diminishes in volume, till the masses it forms become flat; as the desiccation proceeds, the colour deepens, till it becomes quite brown; but notwithstanding these changes, the tendons and the aponeurosis, with their fibrous structure, may still be recognised. Desiccation, however, does not always attend the destruction of the muscles, and those which remain moist are always of a deep colour—green, or that of wine-lees. The dried muscular fibres are ultimately destroyed, and nothing remains in their place but membranous layers of a gray or brownish yellow colour, in which no fibres can be detected; sometimes these layers are moist and brown, and resemble tobacco leaves which have been soaked after having been dried: in some parts of the body we only find, in place of the muscles, areolar masses, brown, and even black, bearing a resemblance to some of the polypiferous animals. At the posterior part of the limbs, the desiccation of which we speak is never so complete, nor does it take place in the back and loins, where the muscles are constantly immersed in liquids; in these parts the muscles are destroyed by a kind of maceration.

Aponeurotic and Tendinous Tissue.—The aponeuroses enveloping the muscles retain for a long time their shining appearance and their consistence, but they have generally a bluish colour where they are thin: the tendons are whiter and more shining, owing to their greater thickness; where, however, they assume an aponeurotic form, they have the same colour as the aponeuroses.

At an advanced period the aponeuroses and tendons become opaline and yellowish, then of a clear and deep brown; they dry more or less completely, and lose their natural pearly aspect, which, however, they recover if they be moistened for some time

with water. The tendons and aponeuroses, with the cellular tissue, constitute nearly the whole of those foliated masses which are the sole residue of the soft textures in these parts of the body, and they finally perish, leaving nothing but the skeleton.

The tendinous tissue is one of those which most strongly resists putrefaction.

Ligamentous Tissue.—For some months the parts forming the joints preserve their relative position, and their ligaments undergo little change in their appearance or consistence. At a later period the ligamentous texture softens and turns yellow, and after a considerable time is entirely destroyed; it resists decomposition much less powerfully than the tendons. The crucial ligaments retain their form longest, the rest are in a few months so blended with the soft parts surrounding the joints, that it is impossible to distinguish them.

Cartilaginous Tissue.—The articular cartilages preserve for a long time their natural appearance and texture, except that they become slightly tinged with a rose colour. At a later period they grow yellow and begin to shrivel; their consistence becomes less and less, they are finally destroyed, and nothing remains in their place on the articular surfaces but a very thin and moist covering, slightly fatty, and of a bistre colour. The cartilages of the ribs also become brown and lose their elasticity; but before their disappearance they become quite black, brittle, and appear as if worm-eaten.

Osseous Tissue.—The bones undergo scarcely any alteration, even after the lapse of several hundred years. Those of King Dagobert, who died nearly twelve hundred years ago, have been discovered at St. Denis; they were in a wooden chest, contained within a tomb of stone. Haller observes, at the commencement of his *Elements of Physiology*, that the gelatine of the bones has been preserved for two thousand years in mummies, while by exposure to the air or a humid soil it is destroyed in a few centuries; the bones then crumble into dust and disappear. The teeth long resist decomposition, and the enamel is nearly indestructible.

Serous Tissue.—The pleuræ, peritoneum, &c., at first become gray and soft, they then become thinner, are disposed to dry, and are easily torn; still later, their colour deepens and turns blueish, olive brown, or blueish black; occasionally also their surface is covered with a layer of black fatty matter; finally they disappear. We were able to recognise the pleura in a subject buried in a thick coffin, and opened fourteen months after death.

Encephalon.—The brain, which putrefies so readily when removed from the cranium, offers greater resistance to this process when shut up within its bony case. Before inhumation it is sometimes gorged

with blood, as the effect of death, the stomach being distended with gas, the diaphragm drawn up, and the blood in the right side of the heart flowing towards the head. For several weeks, if the temperature be not very high, the brain retains its natural appearance sufficiently to enable us to recognise its different parts, and to detect morbid effusions and softenings; it soon, however, acquires a clear olive gray colour. In a short time after, it softens, this process commencing in the gray substance; it diminishes in volume, and no longer exactly fills the cavity of the cranium: at this period a great part, if not the whole, of the convolutions may be distinguished, as well as the two substances, of which the white has become gray, and the other of an olive green. In a case of death from severe apoplexy, the brain was found in a short time to have been reduced to a very soft pulp of the colour of wine-lees. At a later period it becomes softened to a pulp, and emits an exceedingly fetid odour; the two substances are no longer distinguishable, but are both greenish or the colour of wine-lees, and the form of the parts in the different ventricles is lost: here and there, throughout the mass, filaments are observed surrounded by fatty granulations; these appear to be the remains of vessels. At a still more advanced stage of decay the brain becomes less fetid, and its consistence is firmer; it then forms a mass of a greenish gray colour, similar to that of potters' clay, distempered or azured; sometimes the surface of this mass is yellowish, at others it is pierced by worms. In all cases the brain gradually diminishes in volume, and at last only occupies a tenth or twelfth part of the cavity of the cranium; at this time it is frequently saponified. In our numerous dissections we have always found more or less of this organ remaining, when there was no vestige of any of the other viscera; in one instance only the cranium was empty, because its contents had been devoured by worms. The cerebellum and spinal marrow present the same changes of colour and consistence as the brain; they are however usually more softened.

The pia mater and arachnoid follow nearly the same course as other serous membranes. The dura mater strongly resists putrefaction, and for some time suffers hardly any change; eventually, however, it almost always becomes greenish and soft, and often splits into layers, which have a strong slaty smell*. The nerves remain

entire for some months after interment, and undergo no change except in their solidity, which is diminished, and their colour, which becomes slightly rosy.

Globe of the Eye.—A few days after inhumation the cornea has shrunk and lost its transparency, and the vitreous and aqueous humours acquire a slight bistre or a reddish colour. Some weeks after, the eyes are so much collapsed that the sockets at first sight seem empty; the opacity of the cornea, and the coloration of the humours, have increased; the humours have assumed the consistence of a thin fluid, of a bistre colour, which appears to be derived from the choroid: the crystalline lens and the membranes of the eye preserve their characters. In general we have found the eyes entire till the second month; later than this their contents are evacuated, the crystalline and the membranes alone remaining; still later, only the debris of the sclerotic is found; and, finally, the orbits contain nothing but a mass of adipocere in

animals and the dead bodies of persons who had suffered under no derangement of the nervous functions, have established—

1. That the space between the spinal cord and its dura mater is naturally filled with a colourless fluid, which exerts on the cord a certain degree of compression necessary to the exercise of its functions, while it also protects the organ from violent shocks.

2. That the escape of this fluid produces, in the living animal, severe symptoms, which soon cease on the regeneration of the fluid.

3. That a similar fluid is infiltrated in the areolæ of the pia mater, and moderately distends the ventricles of the brain.

4. That the position of this fluid is remarkable, as Cotugno formerly observed, being between the visceral fold of the arachnoid, and the viscus itself, invested with the pia mater.

5. That the cavity between the contiguous surfaces of the arachnoid is lubricated merely by a halitus, and that when any serosity is found there, it is in small quantity, and of a reddish colour, and is generally to be attributed to transudation after death—rarely to irritation of the membranes.

6. That the cerebro-spinal fluid passes easily from the spinal canal into the ventricles, and vice versa, through an aperture situated between the posterior surface of the medulla oblongata and the cerebellum (this appears, however, to be closed by a membrane in sheep). It can easily pass, also, from the spinal canal into the areolæ of the cerebral pia-mater, since it is in both under the arachnoid. These remarks render it evident that the position in which the body is placed during the examination may favour the accumulation of the fluid either in the cranium or spinal canal.

* The presence of a serous fluid in the ventricles of the brain, the spinal canal, or the areolæ of the cerebral pia mater, is not to be referred to the changes in the dead body, nor is it to be considered as a morbid appearance, except when the fluid differs much from its natural quantity or quality. The researches of M. Magendie on living

place of the eye-balls, muscles, and fat. Few organs disappear so speedily as the eyes: in the exhumations made at the Bicêtre we have never found any vestiges of them four months after death.

(To be continued).

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DISEASES OF THE GENITO-URINARY ORGANS.

(Continued from p. 691.)

It is important to state that simple gonorrhœa or urethritis may be induced by excessive sexual commerce between healthy individuals, and both may be affected, and it may also be excited during menstruation or the child-bed (lochia) discharge. It is for this reason that conjugal intercourse was interdicted by Moses, during the two last states of health. There is another cause of the disease, and that is, purulent leucorrhœa. But it is always to be recollected that urethritis or urethral discharge from the male arising from these causes, is exceedingly mild, and usually disappears without the use of medicine. The young practitioner ought, however, to be aware of these causes, lest he pronounce the disease virulent or contagious gonorrhœa, and ruin the reputation of the woman. He should also bear in mind that gout, rheumatism, diseases of the skin, and of the mucous membrane in any part, in the mouth, throat, lungs, bowels, &c. may cause urethritis, or inflammation of that portion of the membrane which lines the urethra. Various articles of diet and of medicine may produce a similar result. It is therefore obvious, from the preceding statements, that there are two forms of urethritis; one a simple inflammation of the mucous membrane; the other a specific inflammation caused by a contagion. This is the opinion of nearly all medical authorities, both national and foreign; with one or two exceptions. Thus, Mr. Travers, the eminent surgeon to St. Thomas's Hospital, maintains the opposite opinion. He holds that gonorrhœa and syphilis are the same disease; and that simple gonorrhœa caused by purulent leucorrhœa is virulent and contagious*. It is on this account that patients affected with gonorrhœa were salivated with mercury a few years since, in the Borough Hospital, which led to the public condemnation of the practice by Sir Astley Cooper, the consulting surgeon of the above-mentioned hospital. The profession in this, and every civilized country agree with Sir Astley, in denouncing this practice, on the grounds of the dissimilarity of gonorrhœa and syphilis. It is almost incredible to suppose it possible, that any scientific surgeon of modern times could entertain the opposite opinion.

* Anniversary Oration, delivered before the Hunterian Society of London, 1830.

Treatment.—It is now almost universally agreed that the antiphlogistic treatment is the most proper for urethritis. When the patient is of a full habit and in the prime of life, one or two bleedings from the arm, with leeches to the perinæum and groins will be the best remedies. It has been repeatedly observed, that leeches to the penis cause ecchymosis and inflammation, and are often succeeded by gangrene. This arises from the vascularity of the cells of the corpora cavernosa. A free use of cold water, linseed tea, or barley water, will act as a diuretic, and render the urine less irritating to the inflamed mucous membrane. Carbonate of soda in the proportion of three or four drachms to two quarts of any of these drinks properly sweetened, will decompose the urine and prevent it from causing the severe scalding or ardor urinæ. The hip-bath is a valuable adjuvant, and generally diminishes all the symptoms. Warm fomentations are also of essential service. Perfect repose and low diet are indispensable to the cure. Walking, riding, or any thing that excites the affected organs will aggravate the disease. It is for this reason that sexual intercourse ought to be avoided. When the inflammation is acute, it will be necessary to exhibit opium, camphor, and hyoscyamus, to allay urgent symptoms, as painful erections, chordee, &c.

The two last are much lauded in free doses every second or third hour. Thus, great benefit will be derived from the use of three grains of camphor and two of extract of hyoscyamus. The piper cubeba will often arrest gonorrhœa on its first appearance; but this medicine must be continued after all symptoms have apparently disappeared, for at least ten days or a fortnight. In first cases, which are in general very severe, all remedies usually fail; though the same will rapidly relieve any future attack.

It is an old and common error to allow gonorrhœa to be fully established, before any treatment is employed. It is clear, however, that as the disease is an inflammation from the commencement, it ought to be treated as such, more especially in those who are affected with it for the first time.

Some practitioners advise stimulating injections, caustic solutions, and bougies on the appearance of this disease; but these are seldom employed by scientific practitioners in this country. They are commonly used in Spain and Portugal, where science is still in its infancy.

Such I conceive to be an outline of the most rational and scientific treatment of acute urethritis, though other remedies are more generally employed; among which are cubebs, capsicum, iodine, balsam of copaiba, lytta, resins, turpentine, &c., stimulating injections, bougies, and cauterization. Most of these remedies may prove

effectual when employed previously to the development of the inflammation, or after it has been very much diminished by treatment, or continued for three or four weeks. It is well attested by surgeons of the highest authority, that a few doses of cubebs administered, on the first appearance of urethritis, will completely prevent its further development; but all the other remedies are improper until the acute symptoms have been abated. It is also on record, that an irritating, astringent, or caustic injection, or the application of cauterization to the fossa navicularis, will arrest and often remove urethritis if employed at the moment of its manifestation; but we are seldom consulted until the disease is developed; when this is the case such a practice is highly injurious, and generally lays the foundation of stricture.

After the antiphlogistic regimen has been fully employed, and the discharge continues copious, unattended with ardor urinæ or scalding, the internal medicines already mentioned may be tried with advantage. They succeed in general in diminishing and finally suppressing the discharge, and are much preferable to the application of local remedies. Some surgeons, however, have advised metallic and astringent injections, such as those of acetate of lead, sulphate of zinc, oxymuriate of mercury; but the majority of the profession are at present opposed to this practice, until the inflammation has abated for some time, and until the ardor urinæ is removed. It is now agreed on all sides, that stimulating injections in the acute state of urethritis aggravate the disease, and lay the foundation of stricture. When the discharge is chronic, the balsam of copaiba and other resins generally succeed in arresting it. Some consider their action specific, as they produce their effects without acting on the bowels or kidneys. Should copaiba act as an aperient, proper doses of opium should be added, and the medicine should not only be continued until the discharge disappears, but for some days afterwards. According to recent French writers, MM. Ribes, Delpech, and Ansiaux, the dose of copaiba may be from one to three drachms twice a day; and this medicine may be given during the acute stage of the disease. In this country the balsam is not given in first cases of urethritis, until after the acute stage has ceased, which is generally about the tenth day. When the disease has frequently occurred, Sir A. Cooper prescribes copaiba and cubebs on its appearance, and speedily suppresses it.

Another mode of treatment consists in the repeated introduction of bougies, during the chronic stage, but this plan is not generally practised by British surgeons, though it is advisable in some obstinate cases. M. Lisfranc, of Paris, has lately recommended the employment of powerful astringent injections, but these are considered objection-

able by most practitioners. Some of our countrymen have, however, long since proposed strong injections of nitrate of silver, but these have very seldom been employed. It is scarcely necessary to observe, that the old practice of purgation is entirely abandoned at present. It has, however, happened that gonorrhœa has suddenly ceased after the operation of a purgative; as it has after the copious libation of ardent liquors diluted, such as brandy, whiskey, gin, rum and water; but this would not justify the administration of either the one or the other in the treatment of acute urethritis. It is well known to every observant practitioner, that those persons who have had repeated gonorrhœa, very often cure themselves by the copious use of diluent fluids. It sometimes happens that the urethral discharge proves extremely obstinate, and defies the ordinary mode of treatment. In such cases M. Lallemand has cauterized a certain portion of the urethra with the nitrate of silver, and states that he has cured a great majority of his patients. He sometimes applied the caustic to the fossa navicularis, but sometimes he passed it along the urethra towards the neck of the bladder. It is generally known to surgeons, that the gonorrhœa usually takes this course, and that in obstinate cases, the neck of the bladder becomes diseased; in the first instance giving rise to the incipient symptoms of stricture, and causing considerable difficulty of voiding the urine. Sir A. Cooper very strongly recommends, as soon as the acute inflammation has subsided, an injection composed of liq. plumbi acetat. dilut. \mathfrak{z} iv; sulph. zinc. gr. vi; and a mixture composed of balsam copaiba, mucilage acacia ana. \mathfrak{z} i; camphor mixt. \mathfrak{z} iv a—table spoonful morning and evening. He employs this mixture and injection, ten days after the commencement of a first gonorrhœa, so soon as the inflammatory stage is over. When the patient has had the disease two or more times, the inflammation is comparatively slight, and Sir Astley administers the balsamic mixture at once. When a discharge becomes chronic, he employs bougies and an injection of the sulphate of zinc, which should be used three or four times a day. He has found a combination of balsam of copaiba with cubebs very generally successful.

I have now described the symptoms and treatment of gonorrhœa or urethritis, and shall conclude this part of my subject, by considering the sequelæ or consequences of this disease.

Swelled Testicle—Orchitis—Hernia Humoralis.—Inflammation of the testicle was at one time supposed to arise from the sudden suppression of the urethral discharge, its absorption into the system, and its ultimate deposition in the testicle; hence it was called hernia humoralis, in consequence of a belief that it arose from a fluxion of humours

to the part. According to modern pathology, it is a sympathetic affection produced by irritation in the urethra. It seldom happens when urethritis is very acute. It generally occurs in slight cases, may come on suddenly without any evident cause, and usually appears about ten days after the commencement of urethritis. It may be induced by a variety of causes, such as purgation, the use of astringent injections, the sudden application of cold to the genitals, much standing or walking, prolonged erection or venereal excesses. The first symptom of this disease is a sensation as if a drop of urine was in the perinæum, accompanied by a sense of heavy pain in the testicle, rapidly succeeded by enlargement of the organ, which, in a few hours, acquires three or four times its ordinary size. The disease extends to the spermatic cord, and this enlarges so considerably that it is sometimes found constricted and almost strangulated by the inguinal ring. The urethral discharge now diminishes, but seldom ceases entirely. This may be easily accounted for on the principle of counter-irritation. If we inquire into the history of the case minutely, we then find that before orchitis commences, the inflammation proceeds down along the urethra, affects the verumontanum, prostate gland, vasa deferentia, proceeding up the cord to the inguinal ring, then to the epididymis, and finally the cord itself. The closest sympathy exists between the urethra and the other parts of the genito-urinary apparatus. The painful erections during urethritis affect the testicles and spermatic cords, as well as the whole tract of the urethra, extend to the parts about the neck of the bladder, and sometimes to this last organ, to the ureters, and even to the kidneys. This sympathy might be proved by the fact that the irritation caused by a bougie in the urethra, will very frequently produce orchitis, and that seminal emissions considerably diminish the pains in the urethra. While the inflammation is confined to the epididymis, the pain is very slight, but becomes acute when the testicle is implicated. It has been often remarked that the right testicle is more commonly affected than the left. Orchitis usually continues for ten, twenty, or thirty days; but may be removed in a much shorter period by judicious treatment. It usually terminates by resolution, but the epididymis remains affected for weeks or months, or even during the remainder of life. In some instances the disease terminates in scirrhous or scrofulous enlargement.

There is much diversity of opinion with regard to the *treatment* of this disease. Some very strongly recommend antiphlogistic measures, others advise the use of calomel and colocynth pills, which, like many other purgatives, often induce the disease. Sir A. Cooper, however, recommends such pills, with inf. sen. and sulph. mag. He then employs an evaporating lotion composed of $\frac{3}{4}$ j sp. wine, and $\frac{3}{4}$ v of water, or one consisting of mur. ammonia water and spirit. In all cases he orders a suspensory bandage, and advises opening three or four veins on the scrotum with a lancet, in preference to leeching. He strongly recommends the compound ipecacuanha powder in irritable constitutions. He states that all the measures sometimes fail, and abscesses in the testicles form, which are to be encouraged with warm fomentations. Should these open and fistulæ form, he advises an injection composed of two grains of sulph. copper in an ounce of water. When fungi appear, he recommends them to be pared off at their roots, and the edges of the wound to be brought into contact. He observes that these fungi are seldom malignant. He finally states, that wasting or atrophy of the testicles frequently occurs in young persons about 15 or 16 years of age, who are affected with gonorrhœa, and the same thing may happen from external injuries.

A recent writer advises a different mode of treatment. Mr. Philips has found balsam of copaiba, in the dose of a drachm three times a day, combined with opium, to prevent violent purgation—the best remedy in the acute and chronic forms of this disease. The general practice, however, is to confine the patient to the horizontal posture, which will obviate the pain produced by the pendency of the testicle; to apply leeches, encourage the bleeding by warm fomentations or poultices, and then to use cold lotions freely—the affected organ being constantly supported with a suspensory bandage. This plan generally arrests acute orchitis, but when the disease becomes chronic, frictions with mercury or iodine generally succeed in removing it. The ioduret of lead and protoioduret have been lately employed with decided success in such cases. In some cases a blister will very speedily produce the same effect. In the acute form, an emetic has effected a rapid cure; and the same result is said to have followed the repeated introduction of a bougie, when the disease has arisen from the suppression of the urethral discharge.

(To be continued).

The London Medical

AND

Surgical Journal.

Saturday, July 4th, 1835.

AN HARVEIAN ORATION.

"I had a dream which was not all a dream."—BYRON.

WE did not attend the late Harveian Oration, but our imagination was so impressed by the recollection of that affecting solemnity, as witnessed by us on former occasions, that our nocturnal couch was visited by a dream, wherein we beheld the College of Physicians assembled, and heard the learned president deliver a discourse in the purest Latin, which we shall translate for the benefit of some of our readers to whom English may possibly be more familiar.

Gentlemen!

The veneration entertained by this College for the memory of Harvey, is sufficiently evinced by our zeal in promoting all those objects to which he devoted his life. Can it be wondered at that we are proud of Harvey? The illustrious discoverer of the circulation was a fellow of our own body, and in his person almost all the genius of our order was concentrated, as is evident from the fact that so few of the succeeding fellows have manifested any!

But, gentlemen, how nearly was Harvey lost to us, and his discovery to the world! Having studied four years at Cambridge, it occurred to him that the medical degree of that university, *intrinsically* valuable as we know it to be, was thought very little of among the nations of the earth; and accordingly he went to Padua, and graduated there. Any surprise that might be excited in our minds by this injudicious preference of Harvey's is at once removed by the consideration of his youth; at the time alluded to he was only nineteen years of age, and had not yet attained sufficient moral elevation to appreciate the value of a medical degree from an

university where nobody knows anything about medicine. On his return to England he providentially repeated his graduation at Cambridge; had he not done so, he never could have become a fellow of the Royal College of Physicians—need I add, that he never could have discovered the circulation of the blood?

Gentlemen, I have asserted our zeal for those studies to which Harvey devoted his life. Our addiction to anatomy and physiology is well known—to *ourselves*; the magnificent works on these subjects produced by the modern fellows of the College have, I assure you, been *privately* printed, and adorn in secret the shelves of our library: only one of our present number has so far lost sight of his professional dignity as to allow his anatomical acquirements to be at all known to the world.

Harvey, fully aware of the folly of the monkish distinction between physic and surgery, diligently cultivated both branches of the healing art: he presented to this College a curious collection of surgical instruments, and delivered lectures on surgery within its walls. Succeeding fellows have followed his example with so much ardour, that it has latterly even become necessary to put a check upon their enthusiasm, by enacting that no person possessed of a surgical diploma shall become a member of our body.

The researches of Harvey on the generation of animals we have endeavoured to follow up, to the best of our ability, by contemning and proscribing the study of obstetrics—of course including embryology.

Gentlemen! In paying a merited tribute of respect and veneration to departed worth, is it not gratifying to men of high moral feeling to find that they have thus scrupulously fulfilled what may be regarded as a sacred trust? When we look on the marble bust which the gratitude of our predecessors has erected to the greatest of the physiologists, is it not pleasing to fancy a smile

of approbation playing around its features, and encouraging us not only to pronounce annual orations in praise of Harvey, but resolutely to maintain science exactly as it stood in his days—that is, *two hundred years ago!*

You are aware, gentlemen, that the oration which I have now the honour of delivering was instituted by Harvey himself, in commemoration of the benefactors of the College; but the truth is, all the old worthies have long since been praised to satiety, and of late years the College has had no benefactors—with sorrow do I say it, gentlemen, our friends are daily falling off; we have now no legacies left us, and the College is only kept in existence by repeated and painful applications to our own breeches pockets. So deplorable, indeed, is the state of our temporalities, that if it were not for the profane jeering which wicked men would institute thereon, I would request my very esteemed friend, the Right Reverend Father in God the Lord Archbishop of Canterbury, to preach a charity sermon in aid of the funds of this institution.

But to return from this digression.—In default of benefactors, who have become exceeding scarce, it has been usual of late years to pronounce a few words of eulogy on those who have most eminently contributed to the honour and prosperity of our profession—and especially those who have been removed by death from the sphere of public utility; many reasons will at once suggest themselves to you why the *defunct* are the best subjects of laudation. (The learned president here made honourable mention of several respectable physicians lately deceased, and continued as follows). Some among you may feel surprised at my omitting the name of Hooper; but I am convinced that none who now hear me in the *moral* spirit in which all orations delivered within these walls should be heard, will misconstrue my silence: it is indeed true that Dr. Hooper did more for medical science than all his contemporaries

whom I have eulogised put together—but, gentlemen, Dr. Hooper was not a *fellow!*

Permit me, in conclusion, to impress on your minds the necessity of rigidly observing the important distinction at which I have just hinted. When I presume to call the particular attention of the *junior* fellows to this momentous subject, I must plead, as my excuse, the paternal solicitude which I feel for their welfare, and for the dignity of our august order. May no mistaken liberality induce even the most inexperienced among us to break down the barrier which separates them from the common herd of physicians; may they never descend from their proud and enviable height of professional aristocracy, to become simple members of the commonwealth of science!

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PURE SURGERY—ODD SUPPOSITIONS.

IN our last number we started a question with reference to a supposed transaction at a metropolitan hospital. We did so in order to elicit information on the subject of a rumour which reached us; but being ourselves at that time ignorant of the names of the parties, we merely put the case precisely as we had it, in an hypothetical form. If all were right, no harm could arise from investigation, while if suspicions were just, the affair was deserving of exposure. We have since become fully acquainted with all the particulars, and are bound to state most explicitly that everything reflecting on the skill or conduct of the hospital surgeon is *utterly false*. The costs were *not* paid by the operator; and we have seen a letter in the hand-writing of the eminent surgeon supposed to have been referred to by the general practitioner, declaring that his examination of the case never induced him for a moment to call in question either the existence of the aneurism or the fact of the brachial artery having been secured by the hospital surgeon. There was a prosecution, and it was hushed up. That the

attorney for the prosecution was purposefully misled by the false statement of some injudicious friends of the general practitioner, as to the real facts of the case; and that some such infamous proceeding was the origin of the report, we have every reason to believe; but there can be no doubt that the conduct of the eminent surgeons alluded to originated from motives highly honourable to them.

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DUPUYTREN'S CLINIC.

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Hydatids.

IN a recent number*, we dwelt at length on the subject of cysts with osseous walls, developed in the substance of the bones; and of which, we observed, the chief pathognomonic sign is a crepitation like that produced on crushing paper, or better still, very dry parchment, between the fingers. We also compared the sound to that of the tumours at the wrist, divided into two parts by the the anterior carpal ligament, when we endeavour by pressure to force the fluid out of one division into the other. The day after the article in question appeared, it happened that a man of about thirty years of age came to the Hotel Dieu, with a tumour on each side of the carpal ligament. M. Dupuytren invited those present to assure themselves of the crepitation, which was apparent both to the touch and to the ear, and which might be compared to the noise produced by a chain of little rings, inclosed in a skin-purse, when we press the links one against another, through the sides of the bag. The surgeon thought it a favourable opportunity for explaining the opinions with which the experience of twenty years has furnished him. His observations were to the following purport.

Tumours of the nature of that before us, are not *exclusively* developed in the situation of the anterior carpal ligaments. They are sometimes found among other places, at the ankle-joint; but, nevertheless their most frequent situation is the anterior surface of the wrist. Their seat is the fibro-cellular tissue near the joint. Wherever they may be placed, they are always divided, more or less equally, into two parts. This remark is important; for we might have been led to believe that the division was owing to the presence of the carpal ligament, were it not that the division exists where no ligament passes over the tumour. Generally free from pain, and without change of colour in the skin (unless the

latter from some cause or other, should take on secondary inflammation), these tumours may, and frequently do acquire a volume sufficient to obstruct the free motion of the neighbouring articulation. Sometimes they put a stop to its motion entirely, prevent the patient from continuing his occupation, and obliges him to seek a cure. If we press alternately on the one and on the other half of these tumours, endeavouring to make the fluid pass from one division to the other, we perceive the sound—the crepitation such as we have described it. In the first case of the kind which M. Dupuytren met with, it was in endeavouring to ascertain fluctuation, that he produced and observed these sounds. The frequent examples which have since come under his notice, have led him to look on this as a truly pathognomonic symptom. At any rate, this sign has never led him into error respecting the nature of the tumours in which it occurred. When the diagnosis, then, is established, what are the curative means to be employed? It is from pathological anatomy, as much at least as from experience, that the surgeon has drawn the rules of treatment we are about to lay down. On opening the first tumour he met with, M. Dupuytren, who had already made up his mind it was encysted, was surprised at seeing escape from it a serous and straw-coloured liquid, in the middle of which were floating some white semi-transparent bodies. Their sides were puckered, and they formed a kind of bag, one extremity of which was terminated by a large rounded *cul-de-sac*, while the other resembled the neck of a bottle. The analogy of these bodies with the hydatids which are met with in other parts of the human subject, the peculiarity of being like them inclosed in a cyst, and immersed in a fluid of which the appearance is similar, immediately led M. Dupuytren to conclude, that they were really hydatids. Having collected several, he submitted them to the examination of M. Bosc, professor of Natural History in the Garden of Plants, a gentleman well versed in the study of Helminthology, and of whom science has had to deplore the recent loss. This professor examined them with the greatest attention, submitting them to the action of the compressor, an instrument in which two parallel plates of glass are gradually brought nearer and nearer to each other, and thus compress, on opposite sides, any body placed between them. This pressure, by making the sides of these bodies tense, rendered the examination more exact and conclusive; but M. Bosc could not by any means assure himself of their vitality; and he therefore concluded they were not hydatids, but probably the *debris* of fatty cellular tissue, floating in the serous liquids.

M. Dupuytren could not by any means subscribe to this opinion. No fatty cellular tissue exists in the regions where they are

* See London Medical and Surgical Journal, No. 176, p. 626.

found; nor does the conformation of these bodies permit us, in his opinion, to suppose they are formed in this manner. Although M. Dumeril, to whom they were likewise submitted, could not, any more than M. Bosc, discover vitality, yet these two naturalists were forced to admit in them an individual existence, apparently independent of the surrounding parts. M. Dupuytren assumed this individuality as at least probable; and along with this individuality, a life altogether independent of that of the body in which they may be developed. In a word he believed, and did believe still, that they are real hydatids. As to the causes of their production, we must refer them to those under the influence of which hydatids are developed in other regions of the body; and they must therefore be sought in the mode in which patients live, or in the dampness of their dwellings, or in a lymphatic and scrofulous constitution. It might have been difficult to believe that any *external* cause, such as a blow or other contusion, could have given birth to them, had not M. Dupuytren seen an instance several years ago, in the case of a young female at the Hotel Dieu. She received on the forehead a blow of a whip, which gave origin to an encysted tumour; and on its being opened there issued a true hydatid, which had completely filled it.

Experience, again, has proved to M. Dupuytren the inutility of all external means, such as *douche*, baths, frictions, &c. in the treatment of these affections. These means, frequently so useful in tumours *not* encysted, have always appeared to him completely inefficacious, when applied to *encysted* tumours. The opening of the cyst, and the suppuration of its internal surface, then, are the only means of effecting a cure. But in tumours of this description, however little developed they may be, the opening and consecutive suppuration of the cyst are not always unattended with danger. Several patients in whose cases M. Dupuytren has opened and brought on suppuration in these tumours, have met with very serious consequences. Some had even fallen victims to an inflammation propagated from the hand to the fore-arm. Experience in the first place, and reasoning in the second, have convinced this surgeon, that when we decide on opening a cyst of this nature, we ought to make a large incision into both halves of the tumour. The propriety of this will be evident from a consideration of the anatomical relations of the parts concerned. At the instep, but especially at the palmar surface of the wrist, these cysts are developed beneath aponeuroses, and in the midst of tendons, vessels, and numerous nerves, bound together by fibrous cellular tissue. Hence, if we have made but a small opening, the swelling produced by suppurative inflammation of the cyst, almost always shuts it up again. The inflammation

is then propagated, more or less, to the surrounding parts, along the sheaths of the cellular tissue which embrace the vessels and nerves, either in the palm of the hand, or the fore-arm and arm; giving rise to numerous collections of pus, to numerous sinuses, sometimes to phlegmonous inflammation of the whole limb, and even to the death of the patient. On the contrary, we are certain to avoid the most frequent cause of all this mischief, by taking care to open at once, and by a large incision, the two divisions of the cyst. No confinement of matter can then take place, and the suppurative inflammation generally commences and terminates favourably.

When once the incisions are made, the liquid has escaped, and the cyst is freed from these semitransparent bodies, which are sometimes tolerably numerous, a piece of lint ought to be introduced between the lips of the wound. M. Dupuytren has sometimes passed a seton from the opening in one half of the tumour to that in the other; but he had now ceased to employ that method, which he considered not only useless but dangerous. It is quite sufficient that the edges of the wound should be kept asunder, and their adhesion thus prevented, in order that the walls of the cyst may inflame and suppurate; and the seton introduced into the cavity appears to excite an inflammation which is too severe, and which may also propagate itself to a distance with greater facility. The inflammation may likewise extend to the interior of the articulation, and give rise to an ankylosed joint. The seton at any rate is useless, and that would be a sufficient reason for not employing it; but further than that, it is dangerous, which is a still more urgent reason for abandoning it.

Incision, then, and the suppuration of the cyst, are the only means of curing these tumours; for we take it for granted, no one would think of extirpating them without opening. It may suffice in reference to that subject, to remark that these tumours adhere strongly by their external surface, throughout all their circumference, to the surrounding parts; so that the idea of extirpating them altogether is inadmissible. With respect, however, to the question of operating at all, we should remember that the suppuration of the cyst is not always without danger; and that notwithstanding the valuable directions of M. Dupuytren, as to the extent of the incisions, and the means of avoiding mischief, there is still room for dreading unfavourable consequences, which may bring the life of the patient into jeopardy. We should also bear in mind that these tumours are never attended with pain, nor do they occasion any other inconvenience than that of obstructing, by their bulk, the motion of the joint. We ought not, therefore, to resort to an operation, unless the tumour has at-

quired a volume so considerable as to fatigue the patient, and prevent the free exercise of his profession; or at any rate unless the patient be very urgent for its performance. In all other cases prudence directs us not to interfere with tumours, which occasion no pain, and are attended with no danger.

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Hospital Reports.

WESTMINSTER HOSPITAL.

Dreadful Accident from Machinery—Diastysis of the Head of the Os Humeri, &c. &c.—Death.

A FINE stout boy, aged 15, was received May 12th, into the Northumberland ward, under the care of Mr. White.

We were not able to obtain a very precise account of the way in which this dreadful accident occurred, but it appears that the boy was employed in some capacity or other in a veneering mill, worked by steam, and that on the day of his admission, he had come in contact with the spindle of one of the wheels of the machinery, and that in this way the fractures and other injuries of the extremities were produced.

There were compound fractures of the tibia and fibula of the right side, in more than one situation. On the left side there was only a severe contused wound. The os humeri on the right side was fractured, as were also thought to be the radius and ulna; there was at least very severe injuries of this extremity in several situations.

The more remarkable part of the accident, however, was seated in the left upper extremity, which had been completely torn from the body at the shoulder, where it was merely connected with the trunk by a narrow ribband of skin. It was not ascertained that any of the ribs had been fractured, though the chest had evidently been severely bruised. Blood was effused between the conjunctiva oculi and the sclerotica.

Mr. White arrived at the hospital speedily after the admission of the patient, and the following means were employed for his relief.

Some brandy was administered, the right leg was put up in splints, &c.; whilst the arm of the same side was merely laid on a cushion. Mr. White then removed the left extremity from the body, by merely dividing the ribband of skin before described. It was now found, on inspecting the removed extremity, that neither had a dislocation of the humerus from the glenoid cavity of the scapula taken place, nor yet even a fracture of the bone itself, in the proper sense of the word, but that the accident, known to the older writers by the name of diastysis*,

* The diagnosis of this case from one of simple ordinary fracture, is effected by taking

had occurred, the shaft of the bone having been disrupted from its superior epiphysis, or the head of the bone (which remained in its articular cavity), in the plane of the anatomical neck of the bone, in which situation till about the period of puberty, or process, when the epiphysis becomes an apophysis, a lamina of cartilage exists.

After the extremity had been removed, a piece of linen rag, dipped in cold lotion, was simply placed over the stump.

Every thing calculated in the least degree to add to the shock which the system had received from the accident, was avoided, whether in the way of minute examination, or changing the dressings, &c., and the greatest stillness was enjoined.

13th. Dosed at intervals only during the night. Complains of great pain and soreness over the body generally; tongue dry and glazed; great thirst; respiration laborious; respiratory murmur abnormally puerile over the front of the chest; pulse feeble and frequent; he takes toast-water repeatedly.

15th. Countenance anxious; appears worse; he does not answer questions unless addressed in a loud voice; increased oppression of breathing, from an accumulation of mucus in the bronchi, which he has not power to expectorate.

Habeat Mist. effervescens, ad libitum. Appr. cucurb. cruent, c ferro regioni sternali, et detrach. sanguinis, ʒ xij.

16th. Was cupped yesterday as directed. Countenance is sunken and anxious, though perhaps less so than yesterday; tongue dry and glazed; lips covered with rhagades; pulse 170, sharp and irritable; he answers questions distinctly, though in a low tone of voice; says he is in no pain; takes drink freely to allay the thirst of which he complains. When Mr. White saw him he thought him somewhat better, and observed that it was extraordinary to see how long he continued after such an injury, which, could the chest be relieved of its load, would almost warrant us in anticipating a favourable termination. He ventured to allow him a little nourishment, in the form of an ounce or two of beef tea, which he took with a relish, and which was to be repeated at the discretion of the house surgeon.

17th. The patient died to-day, having sank gradually through the night.

Tumour of the Tongue.

John Richardson, aged 16, was admitted into Northumberland ward, March 17th, 1835, under the care of Mr. W. B. Lynn. The lad is of a pale delicate looking strumous

into consideration the situation of the lesion, the age of the patient in such cases, as upon a careful *auscultatory* exploration, present no traces of crepitus, which it is obvious can never occur in any case of diastysis.—REPORT—*Am. London Medical and Surgical Journal.*

habit, and apparently of a stunted growth. During the last fifteen months, he has been employed at the gas-works in Westminster. During the late winter, and likewise the preceding one, he had several attacks of *cyananche anginosa*. Five or six months ago, he first noticed an alteration in his voice, and a difficulty in performing the act of deglutition, which were the first symptoms of his present affection. These have gone on progressing regularly, to the time of his admission, prior to which they proved so seriously annoying, as to lead him to seek relief at the hospital. On examining his mouth, and causing him to protrude his tongue, a small roundish tumour was seen about the centre of the dorsum of this organ, situate immediately under the mucous membrane. Upon introducing the finger, it was found that this formed but the anterior border of a large tumour, involving the general substance of the root of the tongue. The boundaries of this tumour could be pretty distinctly ascertained by examining the under surface of the organ where it lies in the floor of the mouth. The superior surface of the tumour was found to be fissured and ulcerated from the round elevated tumour before mentioned, in and around the median line, as far back as the epiglottis and os hyoides, or very nearly.

The surface of this ulcer was very irregular to the touch, and secreted a glairy and imperfect pus, very disagreeable to the taste. The soft palate, with its arches, and the tonsils appear to be implicated in the affection, there being a rather large tumour in the situation of the left tonsil. The anterior arch of the palate of the same side, likewise, appears to have gained a preternatural adhesion to the base of the tongue, from the extension, most probably, of a chronic inflammation from that organ. There is little or no pain except on deglutition, when it is of a dull but shooting kind: the voice is nasal, and very indistinct. The general health of the boy appears to be unaffected by the local affections, though, as before stated, he appears to be only of a weakly character.

Mr. Lynn at first thought that the adhesion between the arch of the palate and the tongue, was the primary affection, and that considerable benefit would be likely to accrue from its division with the scalpel; but Mr. Guthrie, whose opinion he asked, considered the adhesion to be altogether of a secondary and symptomatic character, depending upon the disease in the tongue; the best treatment of which he should regard to be one consisting of iodine and mercury, with attention to the state of the general health. He thought that the best form of employing these remedies, would be that of taking the iodine internally; and in addition, of employing friction, with an ointment of iodine and mercury; to which Mr. Lynn assented.

25th. The following have been ordered for him, and he has commenced the use of the

remedies, with the exception of the iodine, which he has not had yet. *Rx.* Tinct. iodini, \mathfrak{z} j; Capt. æger gtt. x (dosi gradatim aucturâ), ter quotidie. *Rx.* Ung. hydrarg. \mathfrak{z} j; Circa coll. omni nocte infriciend. *Rx.* Magnes. sulph. \mathfrak{z} j; Magnes. carb. \mathfrak{z} ii; Tinct. sennæ, \mathfrak{z} ss; Inf. sennæ, \mathfrak{z} vj; M. capt. \mathfrak{z} ij; P. Rn.

28th. He has employed the ointment three times, and the mouth has become slightly affected; the tumour on the tongue looks less irritable: he has been ordered fish diet.

31st. Since he has been taking the iodine, as well as employing the other remedies, he thinks that deglutition has been easier than before.

April 2nd. The tincture has been superseded by the following form of aqueous solution of iodine: *Rx.* Iodini gr. v; Potassæ hydriodatis, gr. x; Aquæ destillat. \mathfrak{z} ss; M. ft. solutio, capt. gt. v, ter die ex aquæ unciam.

He has likewise had fourteen leeches applied to the neck (the ointment having been discontinued), but at present he remains much the same.

4th. The tumour in the tongue appears to be sensibly diminishing, and as a consequence, the various symptoms arising from it are all somewhat relieved.

8th. Considerable amendment has taken place; the tumour is much less than at last report; and the ulcerated surface on the dorsum appears to be healing. He has, ever since his admission into the hospital, been troubled with otorrhœa on the left side, which has been attended with a considerable degree of deafness, but the discharge from the ear is much less than it has been, and the deafness is not so marked. His general health appears somewhat better than when admitted. He takes the iodine, &c. and no unpleasant symptom has arisen from its use.

18th. Much better—the deglutition and articulation are both improved by the diminished size of the tumour.

22nd. Continues to improve, and is still taking the iodine drops in increased doses.

May 9th. Little tumefaction is now perceptible in the tongue; but there is still an excavated surface on its dorsum, particularly near the root, which though less fissured, and not so deep, has not yet cicatrized.

June 6th. During the last month, the disease appears to have been very much stationary, and the appearances do not seem to warrant at all a more favourable report than at that period. The quantity of the iodine drops has now been increased to thirty drops at the dose, without producing any unpleasant effect; during the last week it has been totally suspended. A few days ago a piece of caseous substance, about the size of a bean, came away with his saliva, which is supposed to have been contained in a tubercular cyst, forming the basis of the lingual tumour. The deafness of the left ear is now nearly gone.

9th. Discharged the hospital this day, having been made an out-patient.

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Chronic Orchitis—Hydrocele treated with Iodine.

Samuel Gimbert, aged 36, was admitted April 4th, 1835, into Northumberland ward, under the care of Mr. Guthrie, who being an invalid at this time, the man became a patient of Mr. Hale Thomson, Assistant-surgeon to the Hospital.

He has suffered from an enlarged testicle (of the right side) during the last four months, which was both insidious in its origin and tedious in its progress, making its appearance without any assignable cause having been present, or at least known, with the exception of a slight strain in the loins; and having gradually increased in size until it attained its present magnitude, which is about that of a goose's egg, or even larger. Part of the tumour is however evidently to be ascribed to the presence of a hydrocele of the tunica vaginalis, which appears to have been forming during the same period. Above and behind the hydrocele the enlarged testicle may be distinguished, which is of a cartilaginous hardness, more particularly at its external border, but disappearing towards its anterior and internal margin. Little or no pain is produced by handling it, nor has he pain at other times, except of a very obscure kind. The epididymis appears to participate in the enlargement, but it is with difficulty distinguished from the general swelling. The left testicle is quite healthy.

He is a married man with a family of five children. His general health appears to be unimpaired; his appetite is good and bowels regular.

6th. Mr. Thomson performed paracentesis scroti, and drew off nearly a pint of fluid.

8th. A hard swelling has appeared on the internal surface of the head of the left tibia, of which he complains as being very painful, which on examination appears to depend upon inflammation with thickening of the periosteum. Mr. Snowden, the house-surgeon, has directed the application of leeches over the tumour, and subsequently, common emollient cataplasms.

10th. The leeches and poultices have given him great relief; but he still complains of nocturnal pains, especially in the superficial part of the bone. Although he has occasionally had a sore throat, there does not appear to be sufficient ground to ascribe either that or the affection of the bones to a syphilitic taint; and as he altogether disclaims having ever been the subject of any primary symptoms, it seems reasonable to regard the present affection as being of an arthritic nature.

The following remedies have been directed for him.

Rx. Pilul. hydrarg. gr. v. ft. pil. omni nocte, maneque sumend.

Rx. Decocti sarsaparillæ Oss, quotidie libend.

14th. The tumefaction of the head of the tibia has become much diminished, but the nocturnal pains are still very troublesome.

15th. Remains much the same. A little tenderness of the gums has manifested itself.

Rx. Emp. carthar. genu appl.

18th. Much as before; slight pyalism is present.

Habeat statim ol ricini, ʒ ss, sumat; pilul. hydrarg. quotidie.

25th. He was ordered the following on the 23rd.

Rx. Tinct. iodine, ʒ ss; Potassæ hydriod. gr. ij; aquæ, ʒ viij. M. ft. Mist. capt. cochl. ampl. j, bis die.

After taking the first dose of medicine, a rather severe diarrhœa made its appearance, which however ceased on his omitting the sarsaparilla, which he had been taking at the same time. The testicle is somewhat less swollen and hard. There is still a good degree of pyalism, and he has not yet omitted taking the mercurial pill once daily.

30th. The testicle remains much as before; the general tumefaction, however, is increased, by a fresh accumulation of fluid in the tunica vaginalis.

May 9th. Mr. Thomson again evacuated the contents of the hydrocele, which amounted to four or five ounces of a yellowish serum. He performed the operation with a lancet, and did not employ a trocar. The testicle was now found to have undergone considerable reduction of size and hardness. He continues to take the iodine mixture.

18th. He continues better, and only a slight secretion of fluid appears to have been going on in the tunica vaginalis.

June 9th. During the last three weeks the testicle has gradually grown less, and all the symptoms have by degrees left him. He was considered sufficiently relieved to be able to leave the hospital, though he is to continue as an out-patient.

15th. When he was at the hospital to-day, he stated that very little enlargement of the organ is now remaining.

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POLICY OF SMALL FEES TO JUNIOR MEDICAL PRACTITIONERS.

To the Editor of the London Medical and Surgical Journal.

SIR—Being an anti-monopolist I feel confident you will oblige me by inserting the following statement.

Graduated Fees in Dublin.

"Et les hommes en place répètent à ceux qu'on dépouille paix paix c'est pour votre bien."—PASCAL.

Although much has been said on the subject of graduated fees, the junior members

have not yet risen en masse, to shake of the incubus of an overgrown monopoly in Dublin. In the present crowded state of the profession some change is indispensable with respect to fees, to save the majority from penury; those in power exclaim, that a silver fee would degrade their honourable profession. None could advocate a strict adherence to the laws of honour more than I do, but, there is a pseudo-honour invented by self interest, and preached to the wild imagination of the boy, for the exclusive benefit of the former, which I am decidedly hostile to. When the junior member is qualified to practise, he finds the public, ignorant of his attainments, will only give the guinea to one of his eminent brethren; and as he has been taught to despise a less remuneration, he is obliged to pass through years of obscurity, depending on the fallacious promises of his former masters. What is the consequence of this system? The dupe of to-morrow finds himself deceived "like the first inhabitants of Arcadia, who chased the sun." Year glides after year, until the season of energy is past; the victim of this vaunted honour finds, after attending patients gratuitously for years, that like the squirrel in the cage he has been labouring without advancing; and with embittered feelings accepts some poor Dispensary, where he can bury his disappointment far from the scene of his youthful ambition. This is unfortunately not an exaggerated picture of our present condition. What then is the remedy? Graduated fees. In the army, does the lieutenant expect the same pay as the captain, or the major as the colonel? No; does not the established man in trade demand a higher price than the beginner? Certainly; this is just. Why should our profession differ? The guinea fee is a relic of the age of the buckled wig, and gold-headed cane; in that day a medical man was a demi-god, who never touched silver; but at present that veil of mystery is removed, and hundreds of struggling members, if once this subject were publicly discussed, would come forward in defiance of the monopolists. At present the public cannot offer less than gold or paper, which they regard as too much for a tyro practitioner, consequently it is added to the colossal fortune of some head man. Let us now look to the Parisian medical men, who have certainly advanced with more rapid strides in the pursuit of science than we have. I do not presume to be able to analyse the causes of this superiority; one I am convinced is, that the young man has some inducement to bring his energies into play; the lowest fee is certainly small, but it is something tangible leading to greater benefits. We may point to hope in the distant prospect in vain, while immediate reward spurs on the mind to enervated action. In youth reward is not our only object, fame and notoriety are equally in view; but I insist that without

some remuneration, notoriety is but a bubble. Were the same system followed in Dublin, many a junior member who now parades the sunny side of Grafton-street, would be found in the eager pursuit of his profession. Some nominal supporters of the honourable fee actually take five shillings, by paying four visits for a pound; this will not do, it is coquetting, but does not arrive at what we seek; the patient, perhaps a struggling tradesman, is still obliged to give the pound, where the case required but one visit. I may now ask how can we best effect our purpose? I leave this point for consultation, recommending active treatment.

A Crown Solicitor.

Dublin, June 30th, 1835.

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BOOKS.

Observations on the Climate and Productions of British Guiana, and on the Advantages of Emigration to, and Colonizing the interior of that Country; together with incidental remarks on the Diseases, their treatment, founded upon a long experience within the Tropics. By John Hancock, M.D., &c. 8vo. pp. 89. London. 1835. Frazer.

An interesting essay to the general and medical reader.

The Medical Quarterly Review, No. VIII. July 1. J. Souter.—This journal is discontinued. It was conducted on fair and honourable terms, and its editor is entitled to much praise for the manner in which the work was executed. We perceive that another quarterly journal is announced for the beginning of next year; but we are not very certain that there is room for it, while our contemporary, the Medico-Chirurgical Review, deserves and obtains so much patronage. We are disposed to think the time for quarterlies has almost gone by.

Dr. Ryan's Formulary is published this day, and may be had of his publisher and all booksellers.

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CORRESPONDENTS.

New Regulations of Apothecaries' Hall.—In reply to several correspondents, we have to state, that the Hall will allow registration on receiving a memorial to that effect, which should be forwarded before Thursday, when the court sits. Attendance on midwifery, botany, or, we believe, any subject, will be allowed.

A Birmingham Subscriber.—It is more prudent to omit the correspondence.

F. W. B. will hear from us by letter.

The Clerkenwell Jurists.—The strictures are too personal.—The matter may be left to the opinion of the profession.

The Gold-headed Cane is under consideration.

THE
London Medical and Surgical Journal.

No. 180.

SATURDAY, JULY 11, 1835.

VOL. VII.

LECTURES
ON THE
INSTITUTIONS OF MEDICINE,

DELIVERED BY JOHN FLETCHER, M.D., F.R.C.S.E., AT THE ARGYLE SQUARE SCHOOL OF
MEDICINE, EDINBURGH; SESSION 1834-35.

LECTURE XXIV.

*Various Doctrines of Sympathy considered—Evidences of the Passage of Sympathies by the
Respiratory System of Nerves.*

ANOTHER doctrine, and still a somewhat prevalent one, with regard to the nature of sympathetic irritations is, that they take place through the brain, the direct and primary irritation exciting first, by some unknown means, sensation, while sensation further excites, by means equally unknown, indirect and secondary irritations in distant parts (a). And the proof of this, say the advocates of this doctrine, is that the *same* sensation—for example, that which gives rise to a desire for venery—excited by primary irritations of two different organs, gives rise to secondary irritations of the *same* distant part; whereas *different* sensations—for example, those producing gratification and annoyance—excited by primary irritations of the same organ, give rise to secondary irritations of *different* distant parts: such sympathetic irritation, therefore, they contend, cannot depend on the character of the irritation primarily excited, but must arise from that of the sensation thence resulting. But all this applies only to passion or instinct—not to sympathy properly so called—and in as far as it does even this, it only tells us what we do not require to be informed of, namely, that every form of passion must be preceded by sensation, as the latter must by irritation, while it gives us no sort of clue to what alone we want to know, to wit, by what means passion—no matter how excited—acts as a stimulus on the irritability of distant organs. And that it cannot apply to sympathy, properly so called, is manifest from this, that sympathetic irritations are not less observable when the primary irritation is seated in an organ apparently destitute of sensiferous nerves—the lungs or stomach for instance—than to one furnished with them; that even the division of these nerves, when they exist, makes no material difference in the certainty with which such secondary irritations are excited in distant parts, as in the case of sneezing from volatiles to the nostrils, after the destruction of both the olfactory and trigeminus nerves (b),

(a) The principal authors who have maintained this opinion are, Whytt (Physiol. Ep. 1755), Haller (El. Physiol. 1757), and Monro (On the Struct. and Funct. of the Nerv. Syst. 1783); and with respect, at least to some cases of sympathy, Blumenbach (Inst. Physiol. 1786). It has been recently advocated also by Professor Alison; who has, apparently rather too hastily, concluded that, because Whytt, Haller, and Monro could not, half a century ago, explain the communication of sympathetic irritations upon the principle of any association of nerves, such an explanation must be still

impossible. (Ed. Med. and Surg. Journ. 1826). There are probably many more things, however, in heaven and earth than were dreamt of in their philosophy. Similar doctrines are maintained likewise by Broussais, Georget, and Roux.

(b) Magendie has shown this with respect to the olfactory nerve—and it is his principal argument, although a very fallacious one, to prove that this is not the nerve of smell—and Sir Charles Bell with respect to the trigeminus, a palsy of this nerve on the right side having been found quite compatible with the usual effect of volatiles, ap-

that some of the most striking examples of sympathetic irritation—for example, the act of respiration—are not interrupted during sleep, or in comatose diseases, and are compatible with the congenital defect of the greater part of the brain; and that even the artificial removal of the greater part of this organ does not obviate the occurrence of convulsions, in almost all the voluntary muscles of the body, from a primary irritation of one part of the surface. How is all this reconcileable with the doctrine that it is only through sensation that sympathy operates on distant organs, and that it always takes the brain as a kind of half-way house on its journey? It is true the advocates for the hypothesis in question take no account of the nerves—sensiferous or any other—assuming it is a fundamental axiom that no anatomical principles are at all adequate to explain the route which sympathetic irritations are frequently observed to follow. If, say they, the nerves were the vehicles of the primary irritation, becoming always, as they imagine, sensation, which excites sympathetic action, since different primary irritations of any one part, in journeying to different parts, must each travel by a different road, it follows that every one which is adapted to excite a distinct sympathetic action, must have a distinct nerve to convey it to and from the brain. Among the examples of sympathetic action already enumerated, we find that of sneezing, from acrid substances applied to the nostrils, and, among those of the operation of passion as a stimulus to irritability, that of syncope from depression, such as is excited by mawkish odours, that of a flow of saliva from desire, such as is excited by savoury odours, and that of vomiting from disgust, such as is excited by nauseous odours. Now admitting for a moment that all had to pass through the brain, if we presume, say those who attempt to explain sympathetic action by affirming that it is inexplicable, that such primary irritation is translated by nerves, we must conceive that these are bound up in the sensiferous nerves leading from the nose to the brain, and again from the brain elsewhere—one filament for acrid, a second for mawkish, a third for savoury, and a fourth for nauseous odours, since each has to be conveyed to a different distant part (a). But even continuing to admit that it is through the medium of sensation that all such irritations operate—and such is certainly the case with those which give rise to passion—it seems perfectly easy to understand that the character of the sensation will vary in every case, although conducted by the same nerve, according to that of the exciting cause of the irritation where it arises. It is true, the olfactory nerve takes cognizance only of that produced by odoriferous particles, the optic of that produced by light, and the auditory of that produced by the vibrations whence sound arises; but each is susceptible of very different impressions from different modifications of these respective irritations; and when such impressions, or their consequences, are to be again conducted from the sensorium or brain, so as to act as stimuli on the irritability of distant organs, it is equally easy to conceive, either that they may travel by this or that nerve, according to circumstances, or that, travelling equally by all the nerves belonging to a certain system, they still display their effects only or chiefly on those parts to the specific irritability of which they are respectively adapted—in the same manner as the primary irritation on which expiration depends is conveyed, probably, by the same nerves as that on which inspiration depends, but, being of a different character, it acts on a totally different set of muscles. But with cases of sympathy properly so called, it is probable, for reasons already assigned, that sensation has nothing whatever to do; nor is its instrumentality in exciting the irritation of the brain, in which passion or instinct consist, at all connected with the present inquiry, since, in regarding this agent as a stimulus to irritability, we start directly from the irritation of the brain, however produced, and it is the translation of this to other parts which alone requires to be explained. We may conclude then that the doctrine of intermediate sensation, as applied to sympathetic irritation generally, is erroneous—and as applied to that excited by passion or instinct, is superfluous; and that that which assumes that any association of terms must be incompetent to explain the translation of the primary irritation in which both originate, has not been established by any argument *ad absurdum*.

There still remain two other opinions respecting the communication of sympathetic irritations—one, that it depends on either the contiguity or continuity of the sympathising organs, the other, that it hinges on their similarity in either structure or function (b). But with respect to contiguity or continuity as a means of explaining the simultaneous irritation of any two organs, upon a stimulus being applied to one of them, it is sufficient to

plied to the right nostril, in exciting sneezing. It is fair to acknowledge, however, that the latter fact is denied by Belingeri.

(a) Alison.

(b) These complete the number of the six modes, enumerated by Haller, in which sympathetic actions have been presumed to

be effected, 1, by blood vessels; 2, by nerves; 3, through the sensorium; 4, by contiguity of cellular tissue; 5, by continuity of membranes; and 6, by similarity of structure or function. the contiguous doctrine found an advocate in Bordeu: the continuous in John Hunter; the analogous, at least in some cases, in Blumenbach.

refer to the above enumerated instances of proper sympathetic irritations—and to those excited by passion or instinct the doctrine is obviously quite inapplicable—in order to show that, while frequently little or no sympathy exists between organs the most favourably situated in these respects, some of the most remarkable of these sympathetic irritations take place between organs neither contiguous to, nor continuous with, each other, and consequently that such conditions, when they present themselves, are quite accidental. What contiguity or continuity, for example, is there in the case of the lungs and respiratory muscles, the female genitals and mammæ, the diaphragm and muscles which depress the jaw, the nostrils or larynx, and abdominal muscles? and even where one or other of these conditions exist, as between the fauces and stomach, it has been found that this connexion may be severed without impairing the sympathy between them (a). Moreover, such contiguous or continuous organs cannot, any more than blood-vessels or lymphiferous vessels, convey vital impressions otherwise than by their nerves; so that, although this explanation of sympathetic irritations were true, it would be so only at one remove. And similar objections apply to the hypothesis of a similarity in structure or function as a means of explaining such irritations, no very obvious consent being met with between many parts the most nearly allied in these respects, while such consent is most striking in others without either of these conditions. Besides, a correspondence of tissue can do no more than produce a correspondence of susceptibility—and it is by no means a necessary consequence that it should do even this—so that, from the same stimulus directly applied to two several organs, similar effects should arise—it cannot certainly afford any explanation of the fact that a stimulus applied to the one should be extended to the other, which is what is understood by sympathy; and to bring in analogy in function, when such is observable, as a means of explaining sympathetic irritations, is obviously to confound an effect with a cause, since it is not because the functions are connected, that the parts sympathise, but because the parts sympathise, that the functions are connected.

Upon the whole, it appears that we must return to the nervous system as the vehicle of sympathy and passion or instinct, considered as stimuli to irritability, but not to that department of it which was lately mentioned. That the direct and primary irritation, of whatever nature it be, by which the voluntary movements of the body are excited, is conveyed to the requisite muscles by proper nerves adapted to the purpose, is unquestionable; and, for the same reason that the established residence of sensibility in one department of the nervous system was allowed to furnish an argument *à priori* for referring the analogous property of irritability to another, the established conveyance of the stimulus to voluntary motion by one department of this system may be taken as presumptive evidence that it is by another that the analogous stimulus of sympathy and passion or instinct is translated; nor do the objections which have been stated against regarding the ganglionic system as instrumental in this way, apply equally to every other.

But if this doctrine be maintained, we must be prepared to show, 1st, that there is a system of nerves which, unlike that by which the stimulus to the voluntary movements is conveyed, is very extensively distributed; since the influence of sympathy and passion or instinct manifestly extends to almost every organ of the body; 2ndly, that this system of nerves is quite independent of the sensiferous department; and 3rdly, that its action is not interrupted by sleep or coma, nor even by the want of the greater part of the brain. Now all this is true of the system of nerves called respiratory. It is admitted that it is equally so of the ganglionic system; but if the respiratory nerves are, 4thly, developed in all animals in the direct ratio, not of their irritability, like the ganglionic, but of the manifestation by them of the stimulus of sympathy and passion or instinct; if, 5thly, they are, unlike the ganglionic, similar in structure to the proper motiferous nerves, which convey the analogous stimulus of volition; if, 6thly, again, unlike the ganglionic, they conduct, in common with the proper motiferous nerves, the stimulus of galvanism; if, 7thly, any stimulus applied to them, unlike which happens with respect to the ganglionic nerves, occasions a display of irritation in the parts on which they are distributed; and lastly, if a lesion of these nerves produces a corresponding failure in the conveyance of the stimulus of sympathy and passion or instinct, while a lesion of the ganglionic nerves has no such effect, we shall perhaps have little hesitation in admitting the respiratory system of nerves as the exclusive vehicles of the stimulus in question, particularly when we remember that not only the ganglionic system, but every department of the cerebro-spinal system except this, as well as the brain—cerebrum and cerebellum—is known to be otherwise appropriated, so that this alone of the whole nervous system is left for the purpose.

But it will be necessary to examine a little more in detail each of the foregoing arguments in favour of the doctrine that it is by means of the respiratory nerves that the direct and primary irritation in question is so translated to distant parts as to become there a new

(a) It was found by Bichat that vomiting was produced by irritating the fauces, as

certainly after dividing the gullet, as when this organ was entire.

stimulus to irritability, and afterwards to mention, and endeavour to obviate some of the chief objections to which this doctrine is amenable (a).

I.—The distribution of the respiratory system of nerves appears, at first sight, very circumscribed, and quite inadequate to explain the almost universal extension of sympathy and passion or instinct over the body. The proper respiratory tract, beginning at the tuber annulare, and descending, on each side of the spinal cord, between the anterior or motiferous, and posterior or sensiferous columns, seems to terminate about the middle of the back, having given off in its course only seven pairs of nerves—the distribution of most of which is apparently by no means general—to which must be added, perhaps, some filaments to the intercostal and lumbar nerves, the course of which, however, is still to all appearance confined to the parietes of the chest and belly. But we must remember that—to say nothing of the numerous other probable ramifications of these nerves—the pneumogastric nerve, throughout the whole neck, chest, belly, and pelvis, is inextricably interwoven with the roots of the ganglionic system; and as this system may be presumed, as already explained, to be universal in its distribution, partly from its everywhere accompanying the blood-vessels, and partly from every cerebro-spinal nerve, the respiratory inclusive, being reinforced by one or other of its several departments, so, whithersoever a ganglionic nerve goes, thither a respiratory filament may be presumed to accompany it. Not to mention, then, any of the other nerves of the respiratory system, the probable distribution of the pneumogastric nerve alone seems sufficient to establish the claim of this system to be regarded as almost universally disseminated. We know that such is the case with the pneumogastric nerve of fishes; and when to this we add, in the superior tribes of animals, the various other nerves belonging to this system, and consider them as all associated

(a) In the tabular view formerly presented of the nerves of the human body, arranged “after their kinds,” the respiratory system comprehended the pathetic, the facial, the glosso-pharyngeal, the pneumogastric, the accessory, the phrenic, and the external respiratory; but the uses formerly, and still by many ascribed to most of the individual nerves of this system—for of the whole collectively nothing was till very lately known—have been extremely various. Thus the pathetic has been commonly regarded as a simply motiferous nerve; the facial, sometimes as a vehicle of sympathy—not however in as far as it appertains to the respiratory, but is supposed to appertain to the ganglionic system, as by Bellingeri—sometimes as a simply motiferous nerve, as by Mayo, and sometimes, besides being a vehicle of sympathy, as a regular nerve, or consisting of both motiferous and sensiferous filaments, likewise by Bellingeri—the glosso-pharyngeal and pneumogastric, at one time—qua ganglionic—as vehicles of sympathy, as by Bellingeri, at another as simply motiferous nerves, at another as sensiferous nerves, as by Brachet, who represents at least the pneumogastric as conveying certain irritations from the viscera to the sensorium, so as to occasion the sensations giving rise to the desire to breathe, to eat, and so forth, and at another, lastly, as regular nerves; and the accessory, phrenic, and external respiratory, either as simply motiferous, or as regular nerves. In the mean time Prochaska seems to have been one of the first explicitly to promulgate the doctrine that at least the pneumogastric nerve was, per se, a vehicle of passion (Comm. de Funct. Syst. Nerv. 1800), and it had for some time been suspected that the function of respiration was more particularly under the influence of the l

ral portions of the spinal cord, which had been described as distinct from the anterior and posterior portions of it by Chaussier (Exp. Sommaire, &c., 1807), especially, as suggested by Le Gallois, of that portion of it which is within the skull (Sur la Principe de la Vie, 1812), whence many of the principal nerves above enumerated arise; but it was reserved for Sir Charles Bell (Phil. Trans. 1821 and 1822), and his coadjutor, Mr. Shaw (Lond. Med. and Phys. Journ. 1822), to establish, at once, the existence of the distinct system of nerves called respiratory, and the uses to which it is subservient. The name is unfortunate, since it alludes only to an indirect, instead of a direct effect of their agency, and what is more, to one effect only out of thousands; but to have called it sympathetic, would have been still more ambiguous, this name having been appropriated, by general consent, to a system of nerves which has pretty certainly nothing whatever to do with sympathy; and perhaps it is of very little importance what it is called, provided we do not allow the name to circumscribe in any degree our ideas of its nature and office.

*“What’s in a name? That which we call a rose,
By any other name would smell as sweet.”*

It is to be observed also that the admission of these nerves as respiratory, is equivalent to the admission of them as vehicles of sympathy, at least in one instance, since it is by sympathy alone, between distant parts, that respiration is effected: and as nature never uses two hands where one will do, we might hence have inferred that they were, in every instance, the vehicle both of sympathy in general, and of that particular sympathy in which passion or instinct, regarded as a stimulus to irritability, consists.

together at their common origin (a), through which an impression made upon any one is communicated, according to its intensity, to more or fewer of the rest, we shall be at no loss, on the score of limitation, either in tracing a respiratory nerve to every organ of the body, or in explaining, by means of such nerve, its sympathy with others. Thus, between the lungs and respiratory muscles the sympathy appears to be maintained by the pneumogastric nerve, with which the former are furnished, being associated at its origin at once with the roots of the intercostal and phrenic nerves, so that, when the primary irritation, calling for the inspiratory process, is moderate, the intercostal muscles and diaphragm alone are excited, with those of the accessory and external respiratory nerves, so that, when this primary irritation is more severe, the muscles on the front of the neck, also, and sides of the chest are called into action, with those of the pathetic, facial, and glosso-pharyngeal nerves, so that, on this primary irritation becoming intense, many of the muscles of the eyes, face, and throat are involved in the general perturbation, and lastly with those of the lumbar nerves, so that the primary irritation, calling for the expiratory

(a) It would be improper to assume that all the nerves above enumerated as respiratory arise from a common tract, without remarking that this fact is by no means universally admitted. Thus, the pathetic nerve has been commonly described, since the time of Vieussens, as arising from the corpora quadrigemina, and considered as a nerve of voluntary motion; the facial is generally represented as arising from the tuber annulare and corpora olivaria, which, according to Bellingeri, is true only of the smaller portion of the nerve—which is described by him as a kind of ganglionic nerve—while the larger portion, he says, arises from the corpora restiformia and sides of the fourth ventricle, and is a compound motiferous and sensiferous nerve; and the glosso-pharyngeal and pneumogastric nerves are described by Vieussens, Santorini, and others, as arising, partly from the corpora olivaria, and partly from the crura cerebelli, and they are again classed with the ganglionic nerves by Bellingeri; so that the only nerves of the above system generally acknowledged as having the origin ascribed to them by Sir Charles Bell are the accessory, the phrenic, and the external respiratory. With respect, however, to the pathetic nerve, its minute size, which so long prevented it from being recognized as a nerve at all, may easily explain the circumstance of its origin, from the summit of the respiratory track having been, till lately, overlooked; and the circumstance of its passing into the orbit—a respiratory nerve in the orbit, so fertile a theme of ridicule to those who allow themselves to be governed in their conceptions by a name—furnishes no objection, but on the contrary, a strong support to the opinion that its origin and office are such as have been above presumed; at any rate, its supposed origin from the corpora quadrigemina is as incompatible with the notion that it is a motiferous, as that it is a respiratory nerve; and, as it is certainly either the one or the other, we seem quite justified in assuming that as its origin which explains its office in the latter capacity, in preference to that which does not explain its office in the former. But still greater ambiguity appears to exist with respect to the sources of the

facial nerve. That a small portion of this nerve arises from the tuber annulare and corpora quadrigemina is unquestionable, but the office of this portion is not and cannot be that of a ganglionic, but of a motiferous nerve—as will be in future more particularly explained, while the bulk of it arises, not from the corpora restiformia and sides of the fourth ventricle, but from the respiratory tract immediately between the corpora olivaria and corpora restiformia; and its office, therefore, is not that of a regular nerve—which it could not be consistently with either its supposed or real origin—but that of a respiratory. Lastly, the glosso-pharyngeal and pneumogastric nerves, while they also in part arise from the corpora olivaria, have their origin principally, not from the crura cerebelli, but, like the facial, from the respiratory tract immediately between the corpora olivaria and these crura, so that their office is no where that of ganglionic nerves—which is incompatible with any view of their origin—but, in as far as they have the former source, that of motiferous nerves, as will be stated more fully in future, and in as far as they have the latter, that of respiratory. It may be observed, moreover, in conclusion, that it is only upon the presumption that the functions of the several cerebro-spinal nerves must be different, as arising from different parts, that any necessity exists for showing that all the nerves above enumerated have a common origin, in order to be justified in regarding them all as vehicles of sympathy and passion or instinct. It has never been proved, although it is no doubt highly probable, that not more than one central portion of the cerebro-spinal system and the nerves immediately connected with it can perform this office; so that if any strong reason exist for regarding any one of these nerves as ministering to this end, such as the circumstance of its being, in certain animals, vicarious of some other nerve which, in other animals, is known to do so, or the effects of direct experiment upon it, it needs not be at once excluded from this office, because it cannot be distinctly traced to the common centre in question. There may be association without unity.

process, excites in like manner the abdominal and lumbar muscles to action, more or less violent in proportion to its intensity (a). Upon the same principle, the sympathy between almost every organ of the body and the heart seems to be maintained by the several respiratory nerves which are supplied to these organs, being associated at their origins with that of the pneumogastric; that between the nostrils and lachrymal gland by a similar association of the facial and pathetic (b); between the mouth and salivary glands, of one portion of the facial, the glosso-pharyngeal and pneumogastric, and between the female genitals and mammae, of the pneumogastric, the intercostal, and perhaps also the phrenic, and external respiratory; between the fauces and stomach, of the glosso-pharyngeal and pneumogastric; and between almost every other part of the body and this organ, of numerous other respiratory nerves and the nerve in question. So also between the choroid coat and iris the sympathy may be presumed to be effected by the association, at their origins, of the different portions of the pathetic nerve (c); between the ear and gums of the different portions of the facial; between the diaphragm and the muscles which depress the lower jaw, of the phrenic and facial nerves; between the stomach and diaphragm, of the pneumogastric and phrenic; and between the former organ and all other parts of the body, of the pneumogastric and various other respiratory nerves. Lastly, the nostrils, larynx, eye, &c. appear to extend a sympathy to the abdominal muscles, by the association, at their origins, respectively of the facial, pneumogastric, and pathetic, and the lumbar nerves; the rectum and urinary bladder to the same muscles by a similar association of the pneumogastric and lumbar; and the integuments of the arm-pit, or sole of the foot, to the expiratory muscles, and indeed to almost all the muscles of the trunk and limbs, by the association of the pneumogastric—connected as it may be presumed everywhere to be with the several ganglionic nerves going to the surface of the body—and the lumbar and numerous other nerves of the same system. With respect, also, to passion or instinct, the primary irritation constituting which is always in the brain, and immediately communicated, we must suppose, to the respiratory tract, we have only to find a nerve tending from this tract to the organ which is to display the secondary irritation, in order to explain its translation by this system of nerves; and that such a nerve may be always either directly or indirectly traced to every organ liable to be so acted on may be easily inferred from what has preceded. We seem quite justified in concluding, then, that the respiratory system of nerves, so far from being circumscribed in its distribution, is almost universally disseminated over the body; and that it is quite adequate, as far as regards this condition, to be the vehicle of the stimuli in question.

11.—It has been said above that sympathy, properly so called, may display its effects without exciting intermediately any sensation, that it takes place where the primary irritation is seated in parts destitute, to all appearance, of sensiferous nerves, and that, when such nerves exist, it is not obstructed by their division; and, with respect to passion or instinct, that although sensation is a necessary prelude to this, regarded as a mode of thought, it constitutes no link in the chain of its translation, regarded as a stimulus to irritability. The nerves, therefore, by which sympathy and passion or instinct are conducted must be such as are quite independent of the sensiferous system; and that this is true of the respiratory nerves, connected as they are with a tract which occupies the lateral part of the spinal cord, while the sensiferous column is on its posterior aspect, is sufficiently obvious. In the case of sympathy, properly so called, the primary irritation may, or may not excite sensation, according as the part, to which the stimulus is applied, have or have not sensiferous nerves; but the sensation of the odour of snuff, for example, contributes nothing to the sympathetic action, on either the lachrymal gland or abdominal muscles, resulting from its application to the schneiderian membrane, and constitutes no part of the specific gratification which, whether it occasion sneezing or not, it habitually produces, and which appears to consist in a general excitement of the respiratory system of nerves throughout all its ramifications. No direct sensation is excited by nitrous oxyd taken into the lungs, nor by alcohol received into the stomach, and yet how strong is, in both these cases, the sympathetic action on the rest of the system!

(a) In these cases the translation of the sympathy is *from* the lungs, through the common centre of the respiratory system of nerves, *to* the muscles in question; and it is obvious that, in every case of sympathy, there must be, in like manner, a starting post and a goal. The organ furnishing the former, is sometimes described as displaying an *active*, and that furnishing the latter, a *passive* sympathy, with respect to the other; but there appears to be very little advantage in retaining these terms, particularly as

such sympathies appear to be in general, as we shall in future find, mutually convertible.

(b) The lachrymal portion of the ophthalmic branch of the trigeminus, by which principally the lachrymal gland appears to be supplied, is described by Amussat and others, as receiving a filament from the pathetic, through its nasal portion.

(c) The ciliary nerves, like the lachrymal portion of the ophthalmic nerve, are furnished with a filament from the pathetic, through the nasal portion.

LECTURES
ON THE
PHYSICAL EDUCATION AND DIS-
EASES OF INFANTS,
FROM BIRTH TO PUBERTY.

BY DR. RYAN,

*Delivered at the Medical School, Westminster
Dispensary, Gerrard Street, Soho ;
Session 1834-35.*

LECTURE XLI.

Diseases of the Digestive Organs (continued)—

*Diseases of the Fauces--Quinsies--Cynanche--
Angina, its Pathology and Treatment--Amyg-
dalitis—Tonsillitis—Trachitis—Cynanche
—Maligna—Scarlatina Maligna, its Patho-
logy and Treatment—Cases shewing fatality
of Disease—Supervention of Dropsies in
Children and Adults—Treatment of Disease
in Children.*

GENTLEMEN—I have now to direct your attention to a most important class of diseases—namely, to quinsies, or diseases of that portion of the digestive organs, designated the throat. The tonsils are liable to inflammation in young infants. The disease is, however, most common to children that are able to walk; as these very often expose themselves, or are imprudently exposed by mothers and nurses to wet and cold.

Amygdalitis, tonsillitis, cynanche-tonsillaris, or inflammatory sore throat, is most common to children, adolescents, and adults. It sometimes terminates in suppuration, and occasionally in gangrene. These terminations are, however, comparatively rare in new born infants. Cynanche or angina is commonly termed quinsey; and this comprises all the forms now mentioned, as well as cynanche, trachealis, or croup, trachitis, cynanche pharyngea maligna, or ulcerated sore throat.

Cynanche and inflammation of the fauces (throat), considered in a general view, affects infants most frequently; it sometimes prevails, as an epidemic, in spring and autumn—seasons remarkable for the vicissitudes of the atmosphere; and it is also observed in some countries more than others. Infants are most commonly affected when suddenly exposed to the impression of cold air, after having been in a warm temperature, or when they repose in moist situations while in a state of perspiration. The sudden application of cold to the feet, the action of a current of cold air on the nape or front of the neck, cold drinks, while the body is heated, or in a state of perspiration, the deglutition of acrid or stimulating substances, walking in a contrary direction to a cold wind, long and loud cries, or singing; every thing that suddenly suppresses transpiration (insensible perspiration), or habitual evacuations, and every thing which directly irritates the air-

passages, may excite inflammation of the the throat, windpipe, and induce quinsies.

The preceding causes may be divided into two classes—the first comprises all those that directly act on the pharyngo-tracheal mucous membrane, or that which lines the throat; and the other, those whose action is on organs which sympathise with it. In the first class are all mechanical or chemical irritants, whose source is within or without the individual; in the second, are cold and moisture, which applied to the skin, suppresses insensible perspiration, and determines blood from the skin to the internal organs and mucous membranes.

Angina is often preceded by cold chills, followed by heat; the infant is restless—it is deprived of appetite and sleep, and it often rejects the breast milk, or any other food it may have taken.

The symptoms now vary according to the seat of the disease. If the tonsils are affected, there is difficult deglutition and respiration; the infant raises its hand to its throat; there is swelling externally, and on looking into the throat, we observe inflammatory redness of the soft palate, tonsils, and all parts that are visible. The mouth and throat are dry in the first stage of the disease, but soon become covered with a tenacious mucus or phlegm, and the inflammation extends along the mucous membrane into the eustachian tube to the ear, in which organ severe pain is occasionally experienced. This is often but not always the case.

The characteristic symptoms of inflammatory sore throat, or to speak scientifically, of guttural or pharyngeal angina, are unusual redness, frequently covered with white spots on the posterior surface of the throat, great difficulty or impossibility of deglutition, the return of drinks or aliments by the nostrils, heat and dryness of the throat, and after some time, an expectoration of viscid, ropy, whitish or yellowish mucosity (phlegm), and finally, acute pain in the eustachian tube and ear, sometimes alteration of the voice, and at the same time a difficulty of articulating sounds. In some cases the voice is altered or suppressed, and there is a complete hoarseness.

In tracheal angina, or cynanche (croup), the inflammation affects the margins of the glottis, the larynx, trachea, and commencement of the bronchiæ. In such cases the respiration is impeded, or difficult, the cough is hoarse, the voice trembling, the expectoration slight, but after some time abundant; the pulse is small and feeble, the patient is anxious and restless, and in extreme cases, there appear to be danger of immediate suffocation. There is always some degree of fever in this disease, and it is, in general, more intense in the evening or night.

The duration of faucial, or guttural angina (sore throat), is more or less prolonged, according to the seat of the disease; the tonsillar or guttural form continues for five or

seven days, while the tracheal or croupal terminates in one, two, or three days.

The first usually terminates by resolution, though occasionally by suppuration: and in adults there may be ulceration or gangrene. When the tonsils suppurate, the abscess bursts into the mouth in most cases, and it may be opened with a sharp pointed bistoury. It often happens that tonsillitis, or the inflammatory sore throat, may become chronic, the affected parts enlarged and indurated, and this state may persist, in grown persons—especially in those of a scrofulous habit—for weeks or months, unless removed by some of the preparations of iodine. I have seen some cases in which the tonsils were so enlarged as to impede deglutition and respiration, and to require tracheotomy. In one case of this description, for which the operation was proposed, an empiric passed the shank of a table spoon into the throat, lacerated the tonsils, caused profuse hæmorrhage, and relieved the patient so much that tracheotomy was rendered unnecessary. In chronic tonsillitis the use of iodine, in the form of gargle, and ointment applied to the throat, is highly advantageous, and generally removes the enlargement of the affected parts. There is not the slightest danger in using the hydriodate of potass dissolved in *distilled* water, and sweetened at the time of taking each dose, in cases of infants. I have found it a most valuable tonic and absorbent in the treatment of every form of scrofula and glandular enlargement in children. You see it employed almost daily at the Free Hospital.

The pharyngeal or guttural angina usually terminates by resolution; and occasionally by abscess. Sir Astley Cooper mentions an instructive case of this description, in his Lectures on Surgery. He opened the abscess, and the operation, with proper constitutional remedies, speedily restored the patient to health. Suppuration is however of rare occurrence. The tracheal or croupal angina may terminate by resolution, when proper remedies are employed, but there is often a copious secretion of mucosity which the infant cannot expectorate, and which may cause suffocation; or coagulable lymph is thrown out on the inflamed mucous surface: this is converted into a false membrane which may partially or totally cover the whole internal surface of the wind-pipe, or render it completely impervious, and thus cause death from suffocation. I shall give a full account of the pathology and treatment of this form of angina, under the head of croup. In some cases an abscess forms, bursts, and causes suffocation; or the ulcerated surface does not cicatrize, as it is constantly irritated by the passage of air into the lungs, and will produce chronic angina, laryngeal or tracheal phthisis, and death, unless tracheotomy be performed. Several cases of this kind in adults have been cured by Mr. Carmichael of Dublin, by the opera-

tion of tracheotomy, of which there is a full account in the Dublin Medical Journal, 1834, vol. 4, and also in my Journal, 1834, vol. 4.

In fine, tracheal angina may terminate in gangrene, though this is of rare occurrence.

Each of these terminations are characterized by peculiar symptoms. Thus we presume that resolution will take place when the disease is slight and properly treated, when the respiration is not much impeded, and when there is expectoration, but this is not to be expected in young infants. These do not expectorate, for when they bring up mucosities by coughing, into the throat, they immediately swallow them. Suppuration is to be feared when the disease is prolonged and does not yield to remedies, when the local pain is acute and throbbing, or when there are rigors or cold shiverings without any evident cause. An abscess is indicated in tonsillitis, when there is swelling, a sense of fluctuation, on pressure made with the finger, a whiteness of some part of the tumour, and finally by purulent expectoration and a cessation of all the symptoms.

There can be no difficulty in detecting induration; the inconvenience arising from it leads us to its immediate discovery. Ulceration is accompanied by painful deglutition and respiration, and may terminate in pharyngeal, laryngeal, tracheal, and bronchial phthisis, according to the seat which the disease occupies. Gangrene is to be dreaded, if the fever is intense, and the pain extremely violent, without any sign of resolution, suppuration, or metastasis; the countenance is sunken, the extremities cold and covered with a clammy perspiration, the pulse is small, soft, frequent and weak, and there is a foetid odour issuing from the mouth. We often observe this train of symptoms in the worst form of scarlatina.

Infants are much more subject to the different species of cynanche, or quinsey, than adults, and are treated with more difficulty, on account of their want of reason, and terror of leeches, venesection, and their repugnance to medicine. Such is an outline of the pathology of angina; and I shall now make some general observations on the treatment.

The *treatment* of cynanche or angina, ought to be more or less active, according to the severity of the symptoms. When the disease is slight in very young infants, there is scarcely a necessity for using medicine. A moderate diet, a mild aperient, confinement to bed, with warm drinks, are generally sufficient to effect a cure. The diet of the wet nurse ought to be changed, and such as would remove all stimulating qualities from the breast milk.

When the infant is one or two years old, and suffers from pain during deglutition, evinced by its crying and raising its hand to its throat, the respiration laborious or diffi-

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by Mr. Carmichael of Dublin, by the opera-



Aracia vera.

London: G. B. Shepherd, 2, Old Bailey.



are covered with a brownish fur, there is a foetid odour from the throat, and all the symptoms of typhus or putrid fever manifest themselves. On the fifth or sixth day the scarlet eruption disappears, leaving the skin of a brown colour; the cuticle peels off in small scales all over the body, and may even separate from the palms of the hands and soles of the feet in some cases, specimens of which I now show you.

Should the symptoms improve, the patient regains his appetite and strength; but it often happens that the convalescence is tedious, there is languor and debility, stiffness of the limbs, frequent pulse, disturbed sleep, loss of appetite, great thirst, scarcity of urine, which are rapidly succeeded by anasarca alone, or combined with ascites or hydrothorax. I have known some of these dropsies occur so early as the tenth day; and others three and four weeks after convalescence, and even when the appetite was good. The morbid change of the skin, which causes the exfoliation or peeling off of the cuticle, must derange transpiration, prevent or impede the cutaneous function, and throw a great quantity of the serous part of the blood into the cellular and serous tissues, and thus gives rise to dropsy, or a preternatural effusion of such fluid in these tissues. Malignant or putrid sore throat, and malignant scarlatina, are now very generally considered the same disease, and are treated in the same manner. Some writers describe them separately; but it will be found, on due consideration, that the symptomatology, pathology, and treatment of both, are precisely the same. This disease may terminate in health or death. The favourable termination is announced by the moderation of the symptoms, and by their remission on the fourth or fifth day. The fever diminishes, the state of the throat is improved on the appearance of the eruption, the cuticle desquamates to a greater or less extent, in most but not in all cases, the sleep and appetite return.

The unfavourable termination is expected when the throat is of a deep red, ash, or purple colour, speedily succeeded by sloughs and deep ulcerations, accompanied by salivation, or a discharge of a corrosive, offensive fluid, some of which is swallowed, irritates the stomach and bowels, and induces violent diarrhoea. These symptoms are attended by great prostration of strength, delirium or coma, difficulty of deglutition and respiration, great anxiety of the countenance, the eruption of a dark colour, and in patches on the second day; or it does not appear at the usual time, or for several days afterwards, which state is often followed by cerebral congestion, the lips, throat, and genitals becoming gangrenous, or passive hæmorrhages issuing from the nostrils, mouth, bowels, or bladder.

In other cases the fever continues after the desquamation; there are glandular

swellings, discharges of purulent matter from the nostrils or ears, anxious difficulty of respiration, stridulous voice, indicating the extension of the inflammation to the larynx and trachea; acute pain in the ear, with deafness, the saliva tinged with blood, or of a dark colour; the skin continuing dry, and covered with a fresh eruption, and there is also an increase of fever. On dissection the fauces or throat, larynx, or trachea, are found intensely inflamed, ulcerated, or gangrenous; and as the respiration was difficult, preventing the return of blood from the head, and through the lungs, we find the brain or lungs congested or inflamed. This form of the disease is most dangerous, and often destroys several children in schools, and sometimes three out of four in a day or two in the same family. It is erroneously stated in some works on the practice of medicine, that scarlatina maligna is seldom fatal, though every observant practitioner can attest the contrary. Common inflammatory sore throat usually yields to antiphlogistic treatment, such as already described, and terminates by resolution, suppuration, or induration.

Gangrenous or malignant sore throat, on the contrary, is much more intense, has a tendency to terminate by superficial or deep-seated ulcerations, sloughing, and the other symptoms already enumerated. The disease is so sudden in its progress that depletion or leeching can seldom be employed, and, according to most practitioners, are injurious. The indications of treatment are 1, to prevent the tendency to gangrene by supporting the strength of the system; 2, to promote the separation of the sloughs, and preserve the healthy state of the fauces. To fulfil the first indication, the use of wine, bark, quinine, ammonia, and nutritious diet is necessary; in fact the same remedies should be employed as in the last stage of typhous or adynamic fever.

The second indication will be accomplished by the employment of stimulant, tonic, and astringent gargles, such as infusion of capsicum, of roses acidulated, solutions of the chlorides of lime and soda, of muriatic acid, of myrrh, or watery extract of cinchona.

Rx. Capsici contusi, gr. iv;
Aque bullientis, ℥ viij;
Mellis rosæ,
Tinct. myrrhæ, ā ā ʒ iv.

Sit gargarisma sæpe usurpandum.

Rx. Infusi rosæ, ʒ iij;
Tinct. myrrhæ, ʒ iij;
Sacchari pur., ʒ v.

Fiat gargarisma in usum.

Rx. Sol. chlor. calcis, ʒ j—lj;
Mucilag. acaciæ, ʒ j;
Aque fontis, ʒ iss;
Syrupi simplicis, ʒ iv.

Rx. Vini rubri Insitan., ʒ vj;
æ, ʒ j.

Misce

These may be injected into the throat with a small syringe, or applied by means of a piece of sponge or lint securely tied to a piece of wood or whalebone.

When the sloughs are formed they are often removed by the frequent use of some one of these gargles, and I have found the chloride the best; but should these fail, the diseased parts may be touched with the *linimentum æruginis*, a strong solution of *alumen*, or sulphuric or muriatic acid, in the proportion of thirty or forty drops in an ounce of honey, or the muriate or nitrate of mercury. During the whole course of the disease the strength ought to be supported with animal jellies, chicken-broth, beef-tea, and vegetable jellies, such as arrow-root, sago, tapioca, &c., with a due proportion of wine, or spirit of any kind diluted with water.

If diarrhœa supervene, it is treated with astringents combined with opium, as directed in the description of that disease.

Hæmorrhages will, in general, be restrained by the use of acetate of lead in extreme cases. This is the best astringent for internal use, according to my experience, and it will be found effectual in most cases of bleeding from the lungs, stomach, intestinal tube, uterus, or bladder of children and in adults. The following formula may be used in cases of infants under a year old in passive hæmorrhages:—

Rx. Plumbi acetatis, gr. ss;
Acidi acet. dil., *m* iij;
Aque destillatæ, ʒ j;
Liquoris opii sed., *m* iij—vj;
Syrupi simplicis, ʒ j.

Dosis ʒ j secundâ vel tertiâ horâ.

The external application of vinegar and water, or of the compound solution of *alumen* by means of lint, may be applied to the different outlets of the body.

Sinapisms, blisters, and stimulant liniments are useful, though sometimes followed by gangrene. It is highly beneficial to sprinkle the apartment and bed clothes with a weak solution of chloride of lime, in the proportion of one drachm or about a small tea-spoonful of the powder in half a pint of water. This solution is preferable to that of the chloride of soda, which gives out a more unpleasant odour, that impedes the respiration and induces a sense of suffocation. To obviate the inconvenience of this odour there should be free ventilation, or a current of pure air must be occasionally admitted into the apartment. When the heat of the body is intense in the first stage of the disease, it is to be moderated by sponging the body with cold water and vinegar, or affusing cold water over the naked body. Dr. James Home, of Edinburgh, employed this remedy in measles, scarlatina, and small pox, both before and after the appearance of the eruption. If the lower extremities be cold, they ought to be immersed in warm

water during the cold affusion, or dash, as it is now termed. The bowels should be opened moderately; the cold affusion may be repeated for six or eight minutes, provided the temperature of the body is higher than natural. When the patient is of a full habit, we may employ venesection during the first two days; but in some cases there is a well-marked inclination to putrescency, even on the first day, and detraction of blood is totally inadmissible. Some practitioners advise an emetic at first, in preference to all other remedies, and after its operation they order purgatives in divided doses. These last should be prescribed with caution, on account of the tendency to diarrhœa in this disease. A purgative, however, is necessary, and generally useful at the commencement of the disease, but it is dangerous when great debility or sloughing has taken place.

The malignant sore throat is more sudden and dangerous during some seasons than in others, and will require the application of leeches to the throat, which may prevent gangrene. We also observe one child affected with inflammatory sore throat which, if neglected or not, treated with leeches, purgation, &c., will speedily end in the malignant or gangrenous; while we often see another child in the same or in an adjoining house in the same condition as the former; but by leeching, purging, &c., a cure is effected without any appearance of gangrene. When anasarca, ascites, or hydrothorax supervenes, the following remedies will be found effectual in a majority of cases.

It is scarcely necessary to observe that the dose must be increased or diminished, according to the development and strength of constitution.

Rx. Pulv. jalapæ, c. ʒj—3 ss;
Hydrarg. subm. ʒss—ʒj;
Pulveris scillæ,
—— digitalis, ā ā gr. j—ij;
—— cinnam. comp., ʒj;
—— sacchari puri, 3 ss.

Tere in time et divide in chartulas decem, quarum capiat unam mane nocteque nisi alvus nimis soluta sit.

Children from two to four years of age are generally relieved by this medicine. They may take a diuretic mixture at the same time.

Rx. Potassæ acetatis, ʒss—j;
Syrupi simplicis, ʒ iij;
Spiritus æther. nitros. *mxx*—3 ss.

Dosis ʒ j bis vel ter in die.

In extremely bad cases, when the foregoing remedies fail, the following will prove efficacious, but the greatest care is necessary not to allow it to act too powerfully.

Rx. Elaterii extracti, gr. j—jss;
Hydrargyri submur., gr. xij—xx;
Pulv. cinnamom. comp., ʒj—3 ss;
—— sacchari purificati, 3 ss—ʒj.

In pulveris xij vel xvij, partitione ex-

actissimè facta, divide, ex quibus sumatur unus bis vel ter de die, donec alvus copiose responderit.

Malignant sore throat, or scarlatina, is a most fatal disease, both to children and adults, and often destroys a great number of the former in schools. This is well known to all observant physicians, and the ablest acknowledge it. Yet we occasionally hear some practitioners asserting, in our medical societies, that they have never lost a single case of these; but this only proves their limited experience in treating it. It has fallen to my lot to see two and three dead children in one family, on being called in to treat one or two surviving ones; and I have also seen two adults, aged nineteen and twenty, lying dead at the same time, in consequence of scarlatina maligna, while a third, aged eighteen years, was dangerously affected. Another individual, at the adult age, was a month convalescent, his appetite had returned, and he had dined heartily at noon. He became suddenly anasarctous in a few hours afterwards, was seized with convulsions, for which he was bled, cupped, his head shaved and leeches applied, his bowels freely purged with croton oil, mustard cataplasms applied to his feet, and in spite of the most active treatment, he was dead at two o'clock the following morning.

I was once requested to attend a coroner's inquest, held on the bodies of two children, under three years of age, who died suddenly. But it was rumoured they had been poisoned. It was proved in evidence that they had been seen in apparent health in the morning, though dead in the evening. The bodies were carefully examined, and the morbid appearances were a dark redness about the lower part of the pharynx, which extended into the windpipe about an inch in one and an inch and a half in the other. There was great cerebral congestion in both, and no vestige of eruption on the skin. On inquiring if there were other children in the family, and whether they were well, I was informed that there was one, and that it was ill. On examination it presented the usual symptoms of scarlatina. It was the youngest of the three. I cannot state whether it recovered or died, as I did not attend it. Observation has proved that young infants may labour under the simple or mild form of scarlatina, and older ones of the same family will be attacked with the anginal or malignant form of the disease. The jury found a verdict, that the children died a natural death.

Now these, and numerous other cases I might mention, confirm in my mind the opinions of Sydenham, Huxham, and others, as to the fatality of this disease.

Some of the German writers, among whom is Hahneman, extol belladonna, as a preventive of scarlatina. The medicine is employed as follows:

Rx. Extracti belladon. gr. ij;
Aquæ destillatæ, ʒ j.

Misce.

The dose is from one to five drops four times a day, to children under six years of age, and to those who are older, from six to ten drops.

I have not employed this remedy in a sufficient number of cases to justify me in offering an opinion of its value. Dr. Mac-michael has written in favour of it; but I am not aware that any other British physician has found it a prophylactic.

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Rebiews.

On the Medical Properties of the Natural Order Ranunculaceæ: and more particularly on the uses of Sabadilla Seeds, Delphinium Staphisagria, and Aconitum Napellus, and their Alkaloids Veratria, Sabadilline, Delphinia and Aconitine. By A. Turnbull, M. D. London: Longman and Co. 1835.

THIS volume presents, in a connected form, the information contained in the several treatises already published by Dr. Turnbull, with some additional cases and illustrations. We are happy to find in the preface the following passage.

"The author would caution the profession against expecting too much from the employment of these remedies. In some cases they have given only a temporary relief, whilst in others they have had no effect: but generally speaking he has found them of much more advantage in the treatment of a very distressing class of affections, than any means hitherto discovered, and on this account he would recommend their use."

It is just possible that on former occasions our author may have been himself instrumental in awakening too sanguine expectations of success from the remedies in question.

Among the most striking examples of the efficacy of Dr. Turnbull's practice, is the following case of neuralgia, in which a cure seems to have been effected by the preparations of aconite, after all other remedies had failed. The case is that of Samuel Best, a journeyman printer, aged 32. The early history and treatment of the disease is recorded in a clinical lecture of Dr. Elliotson's, published in the *Lancet* of December 8th, 1832, to which we refer the reader.

"This patient came under treatment,"

says Dr. Turnbull, "about the end of October, 1834, and in detailing his subsequent progress, I shall confine myself to a weekly report, in order to avoid repetition. The history which he gave of his case, was substantially the same as that quoted above. He stated, that since December 1832, he had been suffering in an extreme degree, that he had been in the hospital about eighteen months subsequent to that date, and had been using every remedy that was likely to afford relief, but in vain. He stated, that the only ease he had, was from taking large doses of morphia, to the extent of from ten to twenty grains a-day; but that even these procured him only a few hours of broken rest.

"The pain was seated in the fingers and wrist of the left hand, but particularly in the middle finger, through which, and along the wrist, it darted like a stab with a knife. He could not bear the slightest degree of motion in any of the joints, either of the fingers or wrist, without bringing on a violent paroxysm of pain, and for the same reason he could not suffer the middle finger to be touched. His nails were long and curved. The ring and little fingers were benumbed and painful, and a similar feeling extended up the arm as far as the shoulder. He had had no pain in his face for three months, but he stated that the pain in the hand, at times, almost deprived him of his senses. His appearance was wretched, and indicated the sufferings he endured.

"*First Week.*—Under these circumstances, he was ordered to rub the saturated tincture of the root of the *Aconitum Napellus*, prepared as already directed, for twenty minutes, along the back of the hand and fingers. The friction at first gave him extreme pain, but towards the end of the time he could bear it better, and it gave rise to a sensation of heat in the affected finger, which was attended by a marked diminution of the pain. He was ordered to repeat the friction for ten minutes, twice a day, and to take six drops of tincture of Aconite, prepared for internal use, every four hours, in water. The immediate effect of this treatment was, to enable the patient to do without his daily dose of twelve grains of acetate of morphia, which he had been in the habit of taking for many months before.

"The friction excited sensations of heat and numbness in the hand, and could be borne with greater ease at each successive application, and he could sleep three or four hours at a time without interruption. The dose of the tincture was gradually augmented in the course of this week, to ten drops every four hours, and the friction was ordered to be used till heat and tingling were produced, whenever the pain came on.

"The pain was removed every time the

tincture was applied, and the quantity taken internally occasioned tingling and numbness in the extremities, and acted as a diuretic. The patient slept six or seven hours at a time: he had intervals of perfect freedom from pain, with distinct paroxysms, varying in intensity: and on the seventh day, from the commencement of the treatment, he was so far recovered, that he could bear to have his nails cut, which had not been the case for nine months previously.

"*Second Week.*—During the next seven days, the same treatment was continued. He took the tincture internally, in nearly the same dose, and rubbed it on the affected joints, whenever the pain came on. Under these means, the accessions of pain gradually diminished in intensity, and the intervals of complete relief became longer, so that at the end of this week, he had little pain except on motion.

"*Third Week.*—This week he was directed to continue the same treatment, to use the affected joints as much as he could: this, however, brought on attacks of pain, but these were at once removed by frictions, continued until tingling was produced.

"*Fourth Week.*—On the first day of this week, he was directed to substitute for the tincture, the following ointment.

Rx. Aconitinæ. gr. ii;

Adipis. 3 i. ut fiat unguent.

and to rub with it whenever he had pain.

"The tingling caused by this ointment was very considerable, and generally lasted three or four hours afterwards. He had occasion to use it three times a day, and one grain of Aconitine was added to the second prescription, as the first began to lose its effect. In a day or two he discontinued the tincture internally, and was directed to use the ointment of the ammoniated extract of Aconite, made according to the formula already given, in order to try the comparative effect of this application. In this case it was found to produce a more powerful sensation in the parts than the Aconitine itself, and to be very useful in removing attacks of pain when they came on. He used nothing except the remedies mentioned above, and at the end of four weeks and three days from the commencement of the treatment, he was totally free of pain, and has continued to be so ever since. He can use his hand with perfect freedom, but complains of its not being so strong as the other, probably on account of his having been obliged to keep it for four years almost in the same position.

"On the 6th of January last, he had an attack of pain in the right cheek, on account of his having been exposed to the effects of cold; this was, however, immediately removed by the Aconitine ointment; he has had no return of it, and is at present in excellent health."

We have no doubt that a fair trial will be

given by the profession to the medicines recommended by Dr. Turnbull; and should they be found to possess even half the efficacy supposed, they will be of more value than most other articles of the *materia medica*.

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For a purely systematic purpose it has latterly been attempted to refer the phenomena of congestion to one sole physiological perversion, and to elucidate the proximate cause of the sanguineous fluxions that take place towards the head. In doing this, purely hypothetical considerations take the place of facts, on which account it is unnecessary to dwell on them.

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A peculiar nervous state simulates encephalic congestion; but a just appreciation of the circumstances in which it is developed facilitates the diagnosis. But there are other diseases accompanied with loss of sense and relaxation of the limbs—hæmorrhage, softening of the brain, meningitis, asphyxia, and syncope, induce similar phenomena; these should be carefully distinguished from true congestion. In apoplexy it often happens that the diagnosis is impossible, and the progress of the disease alone affords light to the practitioner.

Softening of the brain and meningitis are preceded by very peculiar phenomena, more or less strongly marked, and which will hereafter be mentioned. In asphyxia, the actual cause of the symptoms may almost always be easily recognized. In syncope, the paleness of the face and suspension of the circulation remove all doubt. If, in the enumeration of the morbid states that may be confounded with cerebral congestion, mention has not been made of narcotism and drunkenness, it is because these two conditions are evidently owing to an afflux of blood towards the brain, that is dependant on particular influences.

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blood that distended them; the choroid plexuses are likewise considerably injected. A limpid, transparent, colourless or slightly roseate serosity is exhaled from the plates of the dura mater, on the surface of the convolutions, or even from the ventricular spaces which it distends.

In the face of such alterations as these, men that shew themselves averse to every scientific progression have asserted that anatomical examination will never give any account of the varied phenomena that are manifested during life. Strictly speaking, this objection may have some foundation, but is no argument against the endeavour to advance our knowledge of the diseases of the nervous centres. Are we any more advanced in the explanation of the varied phenomena that characterise affections of the thorax? and yet who will deny the importance of the modern investigations of them—who will deny the precision of the investigating means presented to us by Avenbrugger and Laennec?

Bloodlettings, proportioned to the strength of the subject and the intensity of the disease constitute the basis of the treatment of encephalic congestions; opening the jugular may be advantageously practised. Abstinence from food secures such means most felicitously; mild drinks are indicated. Above all, care must be had to maintain the patient in a posture that shall keep the head always higher than the rest of the body. If mischief happens, notwithstanding gentle derivatives, mild purgation of the intestinal canal may be advantageously given.

Meningitis.—This is a disease the existence of which is frequently obscure, which has no pathognomonic symptom that allows of its positive detection, and which nevertheless may bring on serious consequences if not properly diagnosticated in its commencement. This difficulty of diagnosis will not be wondered at if we consider the obscurity that still reigns over the functions of the meninges, and the varied and slightly characteristic disorders which alterations of them induce. In fact, it is only through the medium of the brain that the lesions of the meninges are made known to the observer, from which it may be *à priori* concluded that the diseases of the cerebral envelopes have a striking analogy with the affections of the brain itself.

But, before proceeding further in the subject, it is better to establish whether the pia mater and arachnoid are capable of being separately affected. Though formerly a matter of much controversy, it seems now to be settled in the affirmative. Pathological anatomy shews us the arachnoid sometimes covered with a plastic exudation, having all the characters of false membrane; it shews us also adhesions of varied extent and intimacy between the two folds of the enveloping serous membrane, without, however, any participation of the subjacent cel-

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M. Rostan first analyses the value of each particular symptom, subsequently grouping them so as to display the progress and collective phenomena of meningitis. Headache is a very frequent symptom, being present in two-thirds or three-fourths of the meningeal inflammations; it is not characteristic of this or that alteration in particular. It generally passes from one point to another, but always remains for some time in one: sometimes it is fixed and persists in one only; at other times it is only periodical. In some cases it corresponds to the affected point of the arachnoid; at others it is distant from it; its intensity is for the most part considerable, and often so acute is it that the patients cry out in agony. This last character is important, for very few diseases exhibit such intense headache. Sometimes the latter alone announces a phlegmasia of the meninges; at other times it is associated with other symptoms. It always shews the invasion of the disease: it sometimes disappears in the course of it, a sign that is not always favourable, being frequently dependent on a peculiar state of oppression of the sensorial functions, itself the expression of very serious organic modifications.

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Dissection of an individual that has died by encephalic congestion discloses the following alterations:—The integuments of the face and cranium are considerably injected; the sinus of the dura mater distended with black blood, varying in quantity and viscosity, and sometimes coagulated. The pia mater is very much congested; the cortical substance of the brain has a brownish yellow color, and the medullary substance is in a more inctuate condition of it, and the capillaries of

blood that distended them; the choroid plexuses are likewise considerably injected. A limpid, transparent, colourless or slightly roseate serosity is exhaled from the plates of the dura mater, on the surface of the convolutions, or even from the ventricular spaces which it distends.

In the face of such alterations as these, men that shew themselves averse to every scientific progression have asserted that anatomical examination will never give any account of the varied phenomena that are manifested during life. Strictly speaking, this objection may have some foundation, but is no argument against the endeavour to advance our knowledge of the diseases of the nervous centres. Are we any more advanced in the explanation of the varied phenomena that characterise affections of the thorax? and yet who will deny the importance of the modern investigations of them—who will deny the precision of the investigating means presented to us by Avenbrugger and Laennec?

Bloodlettings, proportioned to the strength of the subject and the intensity of the disease constitute the basis of the treatment of encephalic congestions; opening the jugular may be advantageously practised. Abstinence from food seconds such means most felicitously; mild drinks are indicated. Above all, care must be had to maintain the patient in a posture that shall keep the head always higher than the rest of the body. If mischief happens, notwithstanding gentle derivatives, mild purgation of the intestinal canal may be advantageously given.

Meningitis.—This is a disease the existence of which is frequently obscure, which has no pathognomonic symptom that allows of its positive detection, and which nevertheless may bring on serious consequences if not properly diagnosticated in its commencement. This difficulty of diagnosis will not be wondered at if we consider the obscurity that still reigns over the functions of the meninges, and the varied and slightly characteristic disorders which alterations of them induce. In fact, it is only through the medium of the brain that the lesions of the meninges are made known to the observer, from which it may be *a priori* concluded that the diseases of the cerebral envelopes have a striking analogy with the affections of the brain itself.

But, before proceeding further in the subject, it is better to establish whether the pia mater and arachnoid are capable of being separately affected. Though formerly a matter of much controversy, it seems now to be settled in the affirmative. Pathological anatomy shews us the arachnoid sometimes covered with a plastic exudation, having all the characters of false membrane; it shews us also adhesions of varied extent and intimacy between the two folds of the enveloping serous membrane, without, however, any participation of the subjacent cel-

lular tissue in this pathological process. It must, however, be allowed that these facts, otherwise having all the appearance of truth, are not very numerous, and that it is impossible during life to pronounce with certainty on the existence of alterations thus separately attacking the arachnoid. On the other hand, it often is the case that the pia mater and the subserous cellular tissue participate in the inflammation of the enveloping membrane, which makes it necessary in a practical lecture to confound the diseases of both the organs in question.

Another question that presents itself is, whether the membranes can be inflamed independently of any suffering of the brain. Probably dissection can answer this in the affirmative. The practitioner, however, must answer in the negative, for his sole object is not to observe the lesions of the corpse, but those of the living body, and looking to the principal symptoms of meningitis, he cannot refuse to admit a state of direct or sympathetic suffering of the nervous substance.

M. Rostan first analyses the value of each particular symptom, subsequently grouping them so as to display the progress and collective phenomena of meningitis. Headache is a very frequent symptom, being present in two-thirds or three-fourths of the meningeal inflammations; it is not characteristic of this or that alteration in particular. It generally passes from one point to another, but always remains for some time in one: sometimes it is fixed and persists in one only; at other times it is only periodical. In some cases it corresponds to the affected point of the arachnoid; at others it is distant from it; its intensity is for the most part considerable, and often so acute is it that the patients cry out in agony. This last character is important, for very few diseases exhibit such intense headache. Sometimes the latter alone announces a phlegmasia of the meninges; at other times it is associated with other symptoms. It always shews the invasion of the disease: it sometimes disappears in the course of it, a sign that is not always favourable, being frequently dependent on a peculiar state of oppression of the sensorial functions, itself the expression of very serious organic modifications.

In meningitis, cutaneous sensibility is sometimes exalted, more frequently diminished, and sometimes even entirely annihilated, particularly when the disease has run its course, and threatens the speedy dissolution of the patient.

The sight may undergo similar modifications, but some important phenomena are attached to it. Thus we may observe indifferently fixation and immobility of the globe of the eye, in this or that position, or regular movements, something resembling the vibrations of a pendulum, or abrupt,

irregular, almost infinitely varying agitations of it. The pupil also undergoes modifications, being sometimes strongly contracted, and scarcely admitting the rays of light, at other times considerably dilated, and motionless, notwithstanding the transitions from darkness to light.

These physiological perversions may be confined to a single eye, or be present in both simultaneously. The exertion of the function of vision may be painful to the patient, in consequence of its exaltation: on the other hand, the function is sometimes diminished, perverted, abolished. The patients occasionally labour under the most extraordinary hallucinations, sometimes seeing only the half of objects, at others, beholding them double.

Similar perversions of hearing occur; but we pass to the perversion of motility. At the commencement of meningitis the patients are frequently seized with a general or partial agitation, which, as it continues some time severely, cannot fail to engage the attention; to this the name of jactation has been given by authors. The most varied acts arise from this necessity for movement that seizes on the patients. Sometimes the head only turns in a rotatory way; more rarely it is the trunk that is subjected to the changes of position, or the jaws are alternately separated and joined—an act known by the name of *machonnement*. Occasionally the tendons of the fore-arm are alternately rigid and relaxed, constituting twitchings: and sometimes the limbs are shaken by a peculiar tremor that causes every movement to be hesitating. Finally, partial or general contractions, such as are observed in tetanus, are manifested, and announce a lesion of the encephalic substance.

These disorders sometimes become suddenly driven to the highest pitch of intensity. The muscles of relation contract with extraordinary energy, then are utterly relaxed; contract again, and so on, without any fixed periods, forming convulsions. Though mostly present, it sometimes happens that the muscular motility is diminished in the course of meningitis, or even entirely abolished, betokening lesion of the cerebral substance, or, at least, compression of the brain.

(To be continued.)

Comparative frequency of Aneurism in different Arteries of the Body.

M. Lisfranc has endeavoured to ascertain the influence of sex and age in producing aneurism, and its comparative frequency in different arteries. The following are the results:—

Women are in general less liable to the disease than men, but the statements of authors require to be modified. According

to Mr. Wilson, Mr. John Hunter affirmed that he had never met with a woman affected with true or spontaneous aneurism. In Mr. Hodgson's sixty-three cases, in twenty-nine of which the disease was situated in the aorta, the proportion was, fifty-six men to seven women, or eight to one. M. Lisfranc's estimate differs widely from this. In one hundred and fifty-four cases collected by him, none of which could be the subject of a surgical operation, the proportion was one hundred and forty-one men to thirteen women, or nearly eleven to one.

Of the comparative frequency of the disease in different arteries, M. Lisfranc gives the following table:—

1. Popliteal aneurism,	.	.	59
2. Crural, do.	{ at the groin,	{ 26	
	{ other points,	{ 18	
3. Carotid,	.	.	17
4. Subclavian,	.	.	16
5. Axillary,	.	.	14
6. External iliac,	.	.	5
7. Brachio-cephalic,	.	.	4
8. Humeral,	.	.	3
9. Primitive iliac,	.	.	3
10. Anterior tibial,	.	.	3
11. Gluteal,	.	.	2
12. Internal iliac,	.	.	2
13. Temporal,	.	.	2
14. Internal carotid,	.	.	1
15. Cubital,	.	.	1
16. Peroneal,	.	.	1
17. Radial,	.	.	1
18. Palmar,	.	.	1

Hodgson's numbers are, femoral, fifteen; inguinal, twelve; subclavian and axillary, five; carotid, two.

The age at which aneurism most frequently appears has not been sufficiently investigated. M. Lisfranc has collected one hundred and twenty cases in which the ages of the patients were ascertained, and the following is the result:—

13	.	.	1
15 to 20	.	.	3
20 to 25	.	.	5
25 to 30	.	.	12
30 to 35	.	.	24
35 to 40	.	.	15
40 to 45	.	.	20
45 to 50	.	.	17
50 to 55	.	.	11
55 to 60	.	.	6
60 to 70	.	.	3
70 to 80	.	.	3

From this table it would appear that aneurism occurs most frequently between the age of thirty and fifty. In the ten years above and below that period, the diminution is very remarkable. Before twenty and after sixty, the disease is very rare. Aneurism by anastomosis is met with most frequently before the age of fifteen, very rarely among adults, and M. Lisfranc knows of no case occurring in old age.—From M.

Lisfranc's work "*Des diverses Methodes et des differens Procédés pour l'Obliteration des Arteres, &c.*"

Newly discovered arrangement of the Arteries in the Erectile Tissue of the Penis. By Professor J. Müller, of Berlin. (*Archiv für Anatomie und Physiologie*, No. II. for 1835.)

The second number of Müller's (late Meckel's) *Archiv* contains the account of an interesting discovery recently made by the editor, Professor J. Müller of Berlin, relating to the disposition of the small arteries of the penis, which tends to explain the structure of the erectile tissue of that organ—a subject which, notwithstanding the investigations of Cuvier, Tiedemann, Moreschi, and Panizza, was still involved in much obscurity. These observations point out a fact entirely new in the structure of the arteries of the erectile texture, and promise to throw some light on the nature of the erectile condition of the blood-vessels.

Most of those who have investigated the structure of the erectile textures of the penis by injections, have contented themselves with filling the veins of the organ, and thus, although the structure of the venous caverns of the *corpora cavernosa*, and the dilated veins of the *corpus spongiosum urethræ* was sufficiently well understood, yet very little was known respecting the mode of termination of the smaller arteries. It has been generally believed that the same small capillary arteries which nourish the penis carry the blood into capillary veins, that the blood passes from these into the dilated venous branches or sinuses, and that the state of erection depends on the retardation of the flow of blood in these venous spaces.

Professor Müller has, by a careful injection of the arteries of the penis, pointed out, besides the capillary branches which nourish the penis and transmit the blood into the capillary vessels and dilated veins, a number of very remarkable appendices connected with the smaller arteries, both in the *corpora cavernosa penis* and *corpus spongiosum urethræ*, which, from several circumstances, it is very probable are the vessels more immediately concerned in maintaining an increased quantity of blood in the penis during erection.

The easiest way of rendering these two sets of arterial branches apparent is to inject the principal artery of the penis, before its subdivision, with size and vermilion of moderate consistence, and then, making a longitudinal section of one of the *corpora cavernosa*, to wash away any part of the injected mass which may have passed into the venous spaces. The ramifications of the nutrient arteries will then be easily seen upon the inner sides of the venous spaces, the arteries becoming smaller and smaller, until at last

they pass into the minute capillary network, the branches of which cannot be seen with the naked eye. Besides these nutrient ramified arteries, there will also be seen, upon a careful examination, another set of arterial branches of a different size, form, and disposition, which are given off nearly at right angles from both the larger and smaller trunks of arteries. These arterial processes are about one-hundredth of an inch in diameter, and one-twelfth long, and are quite easily seen with the naked eye. They project into the cavities of the spongy substance, and terminate either bluntly or by dilated extremities, without undergoing any ramification. These short arterial processes are turned round at their extremities into a semicircle or more, and present a contorted appearance, which circumstance has suggested to Professor Müller the name of Helicine arteries, which he has applied to them.

The helicine arteries of the penis are more easily seen in man than in any other animal which Professor Müller has examined. He has found them in all the animals in which he has sought for them; they are to be seen at the posterior part only of the penis in the stallion, but in the dog they exist throughout the whole organ.

In man, the helicine twigs of the penal arteries sometimes come off singly, and at other times they form tufts or bunches, consisting of from three to ten branches, and having in general a very short common stem. The swelling at the extremity, when it occurs, is gradual, and is greatest a little way from the end. The helicine branches given off from large arteries are not of a greater size than those coming from smaller ones, and even the smallest capillary arteries of the *profunda penis*, which can be seen with the help of a glass only, give off helicine twigs of a much greater size than themselves.

Each helicine branch projecting into a venous cavern is covered by a thin membrane, which Professor Müller regards as the inner coat of the dilated vein, and when there is a tuft of helicine twigs, the whole tuft is covered with one envelope of a gauze-like membrane. This covering is considerably thicker on the helicine arteries in the posterior part of the *corpus spongiosum urethræ* than in the *corpus cavernosum*, but it seems probable that this is in some measure connected with the state of repletion of the arteries, for when the injection has run very well it becomes difficult to distinguish the external covering.

Professor Müller states, that he could not discover any apertures either in the sides or in the ends of the helicine arteries, but he seems to regard it as probable that minute apertures do exist, which may be of a nature to allow the passage of blood in some states and not in others.

The helicine arteries are not, as some

might be inclined to suppose, loops of vessels which have been incompletely filled, and which, after making a coil, pass into venous spaces, as E. H. Weber discovered to be the case with the arteries of the maternal portion of the placenta; they are merely projecting branches from the arterial trunks containing blood.

The helicine arteries are more numerous towards the root than near the point of the penis. They exist in the *corpus spongiosum urethræ*, especially towards its bulb, but they are not so easily seen there as in the *corpora cavernosa*. They have not yet been observed in the glans. Their structure is nearly the same in all the animals in which they have been observed: those of the ape bear the nearest resemblance to those of man, and in most animals they are less obvious than in the human subject. In the horse and dog they give off small nutrient twigs from their sides, which render them more difficult to be seen in these animals than in man.

Professor Müller conceives these helicine or tendril-like arteries to have an intimate connection with the process of erection, and there is every probability that this is the case; but experiments and observations are still wanting to show in what manner these arterial branches are affected in the erected and non-erected condition of the texture in which they exist.

We recommend to the attention of our readers this discovery of Professor Müller's, whose researches have already done a great deal for the advancement of physiological anatomy. The memoir is accompanied with a well executed engraving, containing numerous representations of the helicine arteries, which we regret that time has not enabled us to copy.

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DISEASES OF THE GENITO-URINARY ORGANS.

(Continued from p. 728.)

Sympathetic Bubo.—This disease consists in inflammation of two or more of the inguinal glands. It is usually preceded by inflammation of the absorbents of the penis, which become enlarged, more especially near the pubes, and the diseased action extends to the inguinal region. The diagnosis between a sympathetic and syphilitic bubo is, that several glands are affected in the former, and one only in the latter; and that the former very seldom suppurates except in very irritable constitutions, or when mercury has been employed.

The *treatment* consists of purgation, leeching, and evaporating lotions, which generally effect a cure. In scrofulous subjects, the disease may assume a chronic form and prove extremely obstinate. The best plan of treatment is improving the general health, and employing the preparations of iodine.

Gleet.—The term gleet is applied to a thin transparent discharge, which continues after the acute symptoms of urethritis have disappeared. It sometimes becomes yellow or green, and may be tinged with blood, after venereal or other excesses. It proceeds from lacunæ of the urethra, which remain inflamed; it is not supplied by the vesiculæ seminales, the prostate, or Cowper's glands, as was once imagined. This discharge is often extremely obstinate, and may continue for several weeks, months, or even for a year or two. Sir A. Cooper relates cases, proving that this disease is contagious for some months after its appearance. He maintains that so long as it continues it is contagious. He relates a case of a gentleman who laboured under gonorrhœa fourteen months prior to his marriage, and had a variety of advice, but a yellow discharge always continued. He was repeatedly told that this was not contagious, but he communicated the disease to his wife. Several instances of the same kind have been related by other authors. I need scarcely observe that a gleet discharge in cases of stricture is not communicable. The same observations as to the contagiousness of gleet in the male applies to the disease in the female. It is on this account that women in apparent health communicate blenorhagia or urethritis.

Treatment.—The best plan of treatment of gleet, consists in the exhibition of those substances that have a specific influence on the urethra, such as copaiba, cubebæ, Chio turpentine, lytta, with bougies, and injections. While we administer the internal remedies, we employ bougies every other day, or as frequently as the irritability of the constitution will permit; and at the same time an injection of oxymuriate of mercury, in the proportion of half a grain to an ounce of water, or of sulphates of lime, copper, or alum.

This plan generally succeeds, but it may fail; and in such cases a blister applied along the urethra very frequently succeeds.

Some surgeons praise pills composed of Chio turpentine and lytta, with cold bathing or cold affusion on the genital organs*. There are two other diseases very frequently produced by urethritis; and these are gonorrhœal ophthalmia, and rheumatism.

It sometimes happens that acute conjunctivitis generally of one, but sometimes of both eyes, suddenly occurs during the acute stages of urethritis. The inflammation at first is slight, but it soon becomes exceed-

* We have found the following remedies generally successful:—

R. Pulv. secalis cornuti, 3 ss;
 ——— piperis cubebæ, 3 j;
 ——— cinnam. comp.
 ——— sacchari purif., aa 3 j.

In chartulas viij divide, ex his suma ur
 ——— ter in die.

ingly violent and rapidly destructive to the organ affected. According to Mr. Cline, Sir. A. Cooper, Dr. Veitch, M. Delpech, and others, it may arise from metastasis of urethritis, as well as from the conveyance of the urethral discharge through the medium of the fingers to the eye. According to Scarpa and Beer, the application of gonorrhœal matter to the conjunctiva sometimes produces but a slight degree of inflammation, and Mr. Pearson denies that there is any connection between the one and the other, as he had seen many thousand cases of gonorrhœa, but not one instance of ophthalmia. Mr. Guthrie, Mr. Lawrence, and many others, are however of opinion that the disease is very often communicated by inoculation.

Dr. Veitch, on the other side, has proved by numerous experiments, that the gonorrhœal discharge applied to the eye of the affected person does not cause gonorrhœal ophthalmia. He applied the matter of purulent ophthalmia to the urethra of the affected individual without exciting urethritis. But when he applied the same matter to the urethra of a different person, it produced virulent gonorrhœa. He further states that an hospital assistant, named Smith, applied gonorrhœal matter to his own eyes, with impunity. Mr. Wardrop, M. Delpech, and Mr. Bacot, have subsequently recorded cases of gonorrhœal ophthalmia, excited by the accidental application of towels and sponges which were used by persons affected with contagious urethritis. It therefore appears that there is the greatest diversity of opinion on the pathology of this disease. Leaving this to be settled by others, I shall proceed to consider the effects of this disease and the best mode of treatment.

The immediate effects of gonorrhœal ophthalmia are sloughing, suppuration, and ulceration of the cornea, with interstitial deposition; and these are followed by escape of the humours of the eye, collapse of the globe, obliteration of the anterior chamber, flattening of the front of the eye, prolapsus of the iris, obliteration of the pupil, anterior adhesion of the iris, and opacity of the cornea.

The indications of *treatment* are the general and local abstraction of blood, purgation, counter-irritation, both generally and locally applied. Mr. Lawrence, in his work on the Venereal Diseases of the Eye, most strenuously recommends large and repeated bleeding, so long as blood can be got from a vein, and he relates six cases, five of which terminated successfully by this method. His advice to take blood from a vein while it can be obtained, has been most severely censured by the reviewers, and other surgeons, which has led him to omit it in his *Treatise on Diseases of the Eye*, lately published. He, however, advises active depletion, even after partial sloughing of the cornea has com-

menced, and states that this treatment was completely successful in preserving the sight. Sir A. Cooper has found moderate depletion, with the ordinary treatment, generally successful. (Lectures). Mr. Guthrie very strongly recommends an ointment of nitrate of silver, which he denominates the black ointment, on the principle of exciting an action greater and of a different nature to that already existing in the part. The formula for his ointment is the following:—

Rx. Argenti nitrat., gr. ij—x;
Liq. plumbi subacet., m xv;
Unguenti cetacei, ʒj.

A portion, from the size of a pin's head to that of a garden pea is introduced between the eyelids, and these being closed, are to be rubbed gently with the finger, so as to diffuse the ointment over the whole conjunctiva. A part of it usually escapes externally, by the motion of the lids, and should be wiped off. The pain caused by it may continue for a few minutes or for several hours, or sometimes for a day, and is best relieved by anodyne fomentations. The ointment may be re-applied after the lapse of three days, and it is seldom necessary to reiterate it oftener. Three or four times it has been successfully tried in common chronic, purulent, and strumous ophthalmia, with thickening of the conjunctiva, opacity, vascularity, and ulceration of the cornea. Mr. Guthrie seems to prefer the ten grain nitrate of silver ointment (*London Medical and Surgical Journal*, 1832, vol. i, p. 265). Many practitioners are of opinion that this ointment is much too violent and too indiscriminately employed at the Westminster Ophthalmic Hospital. Patients treated with it for months, have applied at other institutions with total loss of vision from nebula, which was removed by milder measures. The strictures of the *Lancet* bear out this assertion.

Gonorrhœal Rheumatism.—It has been long remarked that gonorrhœa may excite a rheumatic or painful affection of the joints. In such cases the urethral discharge is sometimes diminished, or entirely suppressed. According to many writers there is a metastasis to the articulations; but be this as it may, the usual remedies for gonorrhœa must be employed, viz. copaiba, cubebs, &c., with the preparations of colchicum, more especially the liquor colchice, which will be used with most advantage.

Gonorrhœa in Women.—Gonorrhœa in women is generally less violent than in males. The inflammation is seated in Cowper's glands on each side of the urethra, and extends to the orifice of the meatus urinarius, and thence to the bladder. The disease extends the orifice of the vagina, and affects the external genitals, the nymphæ, clitoris, the whole vagina, and lining membrane of the womb.

The disease is much less painful in women than in the other sex, on account of the

shortness of the urethra and the more rapid evacuation of the urine over the short urethral surface. The discharge, when profuse, flows over the perinæum, in some cases comes in contact with the mucous lining of the anus, and inflames it. In such cases, there will be inflammation of the lining membrane of the rectum, accompanied by copious discharge when the bowels are evacuated.

With respect to the *treatment*, it consists in the exhibition of those remedies which have a specific effect upon the mucous membrane of the urethra, together with a free use of diluents, and the local application of the liquor plumbi subacetatis dilutus. This may be used as a vaginal injection. The carbonate of soda and liquor potassæ are the best remedies to relieve the ardor urinæ or scalding, on evacuating the bladder. It is generally supposed that there is no medicine which possesses a specific effect over the gonorrhœal discharges in women; but I have been assured of cases in which cubebs and copaiba had as speedy effects as in the male. It is scarcely necessary to observe, that gleet in females continues as long contagious as in males. Mr. Hunter has proved that it will produce gonorrhœa in a healthy male, a long time after gonorrhœal symptoms have ceased, but the same discharge will not affect a person who has frequently laboured under contagious urethritis.

Genital Discharges in Children.—It was long since recorded by obstetric writers, that male and female infants may labour under a purulent discharge from the generative organs, and that this may appear at any period from birth to puberty. It is most common, however, from the second to the twelfth year, especially in delicate scrofulous female children. It may attack one or many children in the same family, at the same time; and is generally supposed by parents, and often by medical practitioners, to be caused by contagion communicated from girls or young women, or to arise from attempts at female violation. These suppositions are generally erroneous, for the disease usually arises from irritation in the digestive system, and is aggravated by inattention to cleanliness. That these causes are sufficient to produce it, must appear obvious on referring to the preceding remarks on urethritis. When mothers discover the body linen stained by a genital discharge, they become alarmed, and question the little patient very minutely, whether any one had tampered with her. The child is terrified by repeated threats, and generally states that some male person has taken improper liberties with her. The mother applies to a medical practitioner, who may be ignorant of the nature of this disease, and who unhesitatingly pronounces it to be contagious urethritis. The mother now applies to a magistrate against the sus-

pected person, the child prevaricates, the surgeon swears that the disease is gonorrhœa, and must have been communicated. There is now strong presumptive evidence against the accused, and he is forthwith committed to prison, on a charge of felony.

Examples of this kind are of very frequent occurrence, and some have very recently happened in which the medical evidence went to prove that a man had communicated gonorrhœa, who was found on inspection to be free from genital disease of any kind, immediately after the occurrence of the alleged offence. The delicate and strumous appearance of the child, and the liability of such to irritation and excoriation of the genital organs, with the inattention to cleanliness among the lower classes, afford strong presumptive evidence in favour of the spontaneous origin of the disease. Moreover, an attempt at sexual intercourse by boys at the age of puberty, or adults, and female children, would be followed by laceration, contusion, or inflammation of the female genitals, and these could scarcely be succeeded by purulent discharge within twenty-four hours. The necessary result of external violence in such cases, would be the formation of an abscess, and healthy pus, and not a muco-purulent discharge.

In all charges of violation of female children, the age of the accused should be considered, the injuries which should follow, when there is great disproportion of the sexual organs of the parties, and lastly, whether he labours under any venereal disease. We should also inquire whether the child, or any of the children in the family laboured under a discharge of a similar description at any former period. It often happens that two or more children are affected at the same time; and this fact would go to disprove the contagious origin of the discharge, or that external violence produced it. Infants from one year old to puberty are liable to it, and we observe cases almost daily in dispensary and private practice. I have known many cases in the children of the most respectable families as well as the poor; and I am convinced the disease is not contagious. It is true it may occur in two female children in the same family at the same time; but in general it attacks but one, and no other, however numerous the family. It is generally cured in a few days, by regulating the bowels, improving the general health, and by making proper local applications.

The discharge generally proceeds from the preputium clitoridis and nymphæ, and is soon suppressed by the black lotion composed of liq. calcis and calomel, with attention to cleanliness, frequent ablution, and moderate purgation. The general health should be restored by the hyd. c. creta, rhubarb, and tonics. When these remedies are employed for a week or two, they generally effect a cure.

Summary of Orfila's Observations on the changes which occur in the Tissues of Dead Bodies after Interment. Appended to Sédillot's Manuel de Médecine Légale. Translated from the French, for this Journal.

(Continued from page 726.)

Organs of Respiration and Circulation.—Before describing the changes induced in the lungs by putrefaction, we will state in a few words what is found worthy of observation in them twenty-four or thirty-six hours after death. If the mortal agony has not been protracted, the portion of the lungs that was most dependent when the body grew cold will be engorged; if, as generally happens, the individual has died in the supine position, and the position of the body has not been changed, the congestion will be found in the dorsal portion of the lungs; if in a prone position, in the anterior portion; and if in a vertical position, as in death from hanging, in the inferior portion. In all these cases the engorgement may be so great as to diminish the cohesion of the parenchyma, and entirely to expel the air from the most depending parts. It is unnecessary to add that the bronchial tubes are also reddened in the parts where the blood is accumulated. *If the agony of death has been long, or the patient has died of a thoracic affection, with considerable embarrassment of the respiration, the sanguineous congestion will occupy that portion of the lungs which was most dependent at the moment of death.* If, under such circumstances, the body of a patient who has died on his back be immediately turned on the belly, the engorgement will notwithstanding be found in the dorsal portion of the lungs, while the part most dependent when the body grew cold will present scarcely any traces of congestion. It follows, from the foregoing considerations, that the position of the individual at the moment of death, or at the time when the body grew cold, cannot be determined merely from the lividity of this or that portion of the lungs, because the duration of the mortal agony is also to be taken into account.

The congestions of which we have been speaking sometimes communicate to the lungs, especially at their posterior part, a black colour, which might be regarded, by an attentive observer, as the result of gangrene or sphacelus.

Let us now examine the different conditions of the lungs at a longer or shorter period after inhumation. They preserve their natural appearance for a considerable time, although they soon become emphysematous; they remain gorged with blood at their back part only for a short time after death: at the end of some months their structure may still be recognised, and the presence of morbid lesions detected. At a later period they are more or less collapsed,

and no longer fill the cavities of the pleuræ; their colour changes to a bottle-green, more or less intense, and inclining to slate colour or blue; on cutting into them their natural texture can now rarely be recognised; they are soft, easily torn, and contain a bistre-coloured fluid. Still later, they present the appearance of two small flattened membranes, close to the lateral parts of the spine; sometimes they are covered with a white mould, and their aspect is so changed that they are recognised only by their situation. At last they gradually lose their moisture, flatten more and more, and form a thin mass composed of several dry and black laminæ, applied to the posterior part of the thoracic cavity, and near the vertebral column: they soon altogether disappear.

The mucous membrane of the trachea and larynx at first becomes of a light olive or blackish green colour; sometimes, however, especially at its upper part, it is gray, slightly tinged with violet, variegated here and there with blackish spots. Afterwards, instead of the green tint, it presents a reddish or wine-lee colour, particularly at the parts corresponding to the cartilaginous rings; lastly, its hue changes to dark brown or black. In some instances the epithelium of this membrane is detached in small layers of various colours. Gray fatty granulations are also sometimes observed of the size of two pin's heads, and of an irregular shape, apparently formed by other granulations much smaller; these corpuscles, as well as the detached shreds of the epithelium, might at first sight be mistaken for foreign bodies introduced into the windpipe. Besides these changes, the larynx and trachea become softer and softer, the cartilaginous rings lose their elasticity, and, after some time, we find only the thyroid and cricoid cartilages separated from each other, spongy, as if worm-eaten, semi-transparent and yellowish, and some rings of the trachea, flexible, and of a yellowish brown colour. At a more advanced period no vestige of these organs remains.

Diaphragm.—This muscle preserves its natural appearance for a considerable time: six or seven months after inhumation we have been able to distinguish its aponeurotic centre and muscular fibres; at a more advanced period it becomes thin, dry, and of an olive or brown colour; it is sometimes perforated with holes, and is finally reduced to a brown and very attenuated membrane, which no longer preserves the form or texture of the muscle. In some instances hard white granulations, composed of phosphate of lime, are found on both its surfaces.

Heart and Blood-vessels.—Before describing the changes undergone by these organs after inhumation, let us consider the state in which they are found twenty-four or thirty-six hours after death. The heart

often appears in its natural state; sometimes it is pale; in other cases it presents a vivid red tinge, or is streaked with red, either in its muscular substance or on its internal surface; lastly, its consistence may be diminished. In like manner, the arteries and veins may be uniformly of a red colour, or streaked with red in their interior; they are usually, however, in their natural state. This red tinge is found indifferently after death from all kinds of diseases, and is to be regarded as a cadaveric phenomenon, evidently resulting from the transudation of blood after death. This is easily proved by direct experiment: thus, if a certain quantity of fluid blood be introduced into an ureter whose colour is perfectly white, and the two extremities tied, the tissue of the canal speedily acquires a red colour. Again, M. Chaussier has demonstrated, that if water coloured with ink be injected into the mesenteric vein, that portion of the stomach which is covered by the liver will, in the course of a few hours, be tinged with black; and the liquid transuding through the coats of the stomach will form spots of larger or smaller size on the epiploon and colon.

If the heart be examined some time after inhumation, it is observed to be sensibly softened and flabby; of a violet colour, more or less intense, or, more rarely, green; it is empty, or contains blood partly fluid and partly coagulated; its colour grows deeper and deeper, especially in the interior, where it finally becomes black; occasionally brown spots are seen on the valves, which are the effect of imbibition, and white, hard sandy granulations are sometimes observed on the internal surface of the auricles, or on the exterior of the heart. At a later period the heart becomes flattened, and reduced to the shape of a tongue, which is of a blackish-brown colour, supple, attenuated, and torn at some points, bearing some resemblance to a double pouch of India-rubber; the parietes may still be separated, so as to exhibit the two ventricles, but the natural texture of the organ is lost; some blackish bands, however, may still be seen, which appear to be the remains of the *columnæ carniæ*. Finally, this, like all the other organs, disappears, and leaves in its place a black, bituminous-looking layer, which is easily removed by washing. The sooner the soft parts of the thoracic parietes are destroyed, the earlier the heart also disappears.

Pericardium.—The pericardium first assumes a reddish, then a deep red, and lastly a blackish-brown colour; it becomes more and more softened, and finally vanishes. We have often found it to contain a larger or smaller quantity of bloody serum.

Blood-vessels.—Two or three months after inhumation, a certain quantity of black blood, fluid or coagulated, is generally found both in the veins and arteries. In some instances, however, we have found

none at the end of a month, and in others we have seen, instead of blood, a sanguinolent fluid of a rose colour, as late as eight or nine months after death. The coats of the blood-vessels first become rose coloured, then red, then deep violet, and at last brown. These tints are strongest in the internal membrane, which sometimes also assumes a bottle-green colour; the coloration is sometimes uniform, and at others confined to patches or striae. For several months the tunics of the vessels are easily separable from each other. In one of our dissections we found the aorta still entire, and perfectly to be recognised at the end of fourteen months after inhumation.

Digestive Organs—Alimentary Canal.—The changes which take place in the alimentary canal after inhumation can only be ascertained by a comparative examination of the state of the parts a short time after death, and several weeks, and even months, after interment. How can alterations of colour, consistence, &c., be recognised, unless we are familiar with the ordinary colour and consistence of the tissues a few hours after death? With a view to such comparison, we shall briefly describe the more frequent appearances in the alimentary canal of those who have not died of inflammation in these parts; and as our observations have been made chiefly on the bodies of aged persons, it is to such that the following remarks are more especially applicable.

Whatever disease an old person may have died of (as cerebral hæmorrhage, ramollissement of the brain, pneumonia, pleurisy, diseases of the heart, &c.), it rarely happens that the mucous membrane of the digestive tube is in a state of perfect integrity; it is seldom that we do not find, in the stomach and intestines, various deviations from the natural state, which, however, can only be considered as morbid in a very small number of cases: nay, more, these alterations are often much more strongly marked than those which result from acute diseases of the intestines sufficient in themselves to occasion the death of a patient. Of all the affections foreign to the alimentary tube, those which occasion the most remarkable changes in its lining membrane, are diseases of the heart and great vessels; and as few septuagenarians die without some morbid alteration of the latter organs, there are also few in whom some changes in the gastro-enteric membrane are not observable. A derangement which is at first only mechanical, as mere injection of the part with blood, may arrive at a point at which it becomes morbid; thus the blood accumulated in these permeable tissues, and acting as a foreign body, often induces a sort of inflammation: the redness is then cherry, or inclining to violet or the colour of wine-lees, and induces deeply the mucous membrane of the stomach, or is chiefly

remarkable at particular points. In other cases, the accumulated blood escapes into the intestinal canal, and gives rise to consecutive hæmorrhages. But previously to reaching that state which may be considered morbid, the gastro-enteric mucous membrane passes through several conditions, which interfere very little, if at all, with the functions of the intestines, and may therefore be regarded as scarcely deviating from those of health.

The œsophagus is usually more injected than natural, and violet-coloured patches or spots of larger or smaller size, exactly resembling ecchymoses, are seen scattered here and there, especially in the inferior third, and towards the cardia; these spots are under an epithelium thicker and denser than that which covers the mucous membrane of the stomach—if, indeed, this texture exist at all in the latter situation. The œsophagus is sometimes contracted in certain parts, at which also its walls are thickened, and the lining membrane thrown into longitudinal folds: no other traces of inflammatory action are observable.

The stomach presents infinite varieties of colour, consistence, volume, diameter, &c. Its mucous membrane is soft and spongy, receiving a vast number of capillary vessels, easily permeable to a greater or less quantity of blood, when the circulation is in any way impeded; it is, indeed, extremely rare to find this membrane throughout of the white colour slightly tinged with rose, which indicates its perfectly healthy condition. But, in the examination of this membrane, it must not be forgotten that it is penetrated with the greatest facility by colouring matters contained within the cavity of the stomach; nor will the most careful and repeated ablutions remove entirely the colour acquired by such imbibition; thus, wine and decoction of bark produce a red colour in this membrane, which inattentive or inexperienced observers might attribute to sanguineous congestion. Other medicinal or alimentary substances may produce the same effect. The presence of a red colouring liquid ought to make us suspicious as to the nature of the coloration of the mucous membrane of the stomach. It may be observed that the colour derived from imbibition is uniform, and does not present those arborizations which characterize the sanguineous injection of the capillary vessels; moreover, washing and maceration remove in part, if not entirely, this adventitious colouring. The mechanical and chemical causes of coloration having been thus considered, we have to examine the effects of stagnation of blood in the vessels.

The colour of the mucous membrane varies, according to the degree of injection, from a light rose colour to a deep black, and this without any material derangement of the digestive functions. The great curvature of the stomach, the great *cul de sac*,

and especially the pyloric extremity, are the seats of this sanguineous congestion, whether from the greater development of the capillary system, or because fluids remaining there favour the injection of the vessels. The colour is seldom or never uniform, but patches occur of greater or smaller extent, and of a rose, bright red, wine-lee, brown, blueish, slate, or black colour; these patches are about the size of the palm of the hand, some larger and some smaller. It is not uncommon to meet with the greater part of the above-named colours in the same stomach, and the lines which divide them are often distinctly defined, so that a brown or red patch is seen immediately contiguous to one of a rose colour. The mucous membrane is often marked with spots which have a scorbutic appearance. The surface of this membrane may be smooth, polished, rugous, dotted, mamillated, and sometimes studded with very small fungosities; large blue veins are also often seen creeping under the lining membrane of the stomach and small intestine, which is of a white or slightly ash-colour. In all these cases, the individual when living was not troubled with any complaint in these viscera.

The consistence of the mucous membrane is far from being the same throughout its extent; in some parts it adheres so slightly that it is raised by rubbing it with the back of the scalpel, and is confounded with the mucus, from which it is scarcely distinguishable; in other parts it is with difficulty detached, even with the edge of the knife. The coats of the stomach are sometimes translucent, and vessels of considerable calibre are seen meandering in their substance; in this case the stomach is of great size—it may be double its natural dimensions. In some instances the viscus is condensed and contracted; its coats are thicker and stronger than natural, and its lining membrane wrinkled, and arranged in numerous folds, which are generally longitudinal. Partial dilatations and contractions are also observed, and the mucous membrane is thrown into folds at the contracted point. We occasionally find the greater part of the mucous membrane elevated from its attachments towards the large end of the stomach, without any disease having existed, but in such cases the circulating system is too highly developed.

Such are the most frequent changes remarked in the stomachs of old persons who have died of diseased heart. These changes, up to a certain point, need not be considered as deviations from health, since they admit of the free exercise of the functions of the stomach. It may be objected to this view of the subject, that the disease of the stomach may have been latent in these instances; to which we reply, that such cases being exceedingly numerous, and explicable on physiological principles, we would rather

regard them as modifications of the healthy state, than as exceptions from pathological rules. The intestines present alterations analogous to those of the stomach. The duodenum is often red, injected, brown, &c., but usually much less so than the stomach. The bile which it contains communicate to it a shade of greenish yellow, which distinguishes it from the stomach, except when bile has ascended into the latter cavity by the pylorus. The portion of the intestines most exempt from alteration is the jejunum; though coloured yellow or green by the bile contained in its numerous villousities, it is rarely the seat of any considerable congestion, of hypertrophy, or atrophy, of dilatation or contraction; such phenomena, however, do sometimes occur.

The ilium, quite as frequently as the stomach, exhibits the violet, brown, black, or blue injections already described; these appear to be owing to the dependent position of the intestine when the body is lying on its back, and are probably produced a few hours before or after death. The mucous membrane of this intestine is very often of a deep red or wine-lee colour, which pervades its whole surface, but is more intense at certain points. The cavity of the intestine is often contracted, and its walls are thickened; more rarely the cavity is dilated, and its walls thinner than natural; this extenuation is sometimes so great that the intestine is transparent and pellucid, and appears as if reduced solely to its serous membrane. Alternate contractions and dilatations are occasionally found.

The rectum, and the ascending, transverse, and descending colon are far from being exempt from the changes under consideration; they present them, however, less frequently, and in a less marked degree. Thickening, contraction, and dilatation, are much more frequent in these parts than vascular congestion; the colour of the large intestine seldom varies from the white, slightly tinged with rose, which is natural to it except where there has been actual disease: to exhibit its natural colour, however, it must be carefully cleansed from the fecal matter which may have tinged it.

On comparing the digestive canal of old persons who have died labouring under disease of the heart, with the same canal in other persons not so affected, it was found that in a man of seventy-five, who died from a burn after eight days' illness, the gastric mucous membrane was grayish, and that of the intestines ash-coloured; that in a woman of eighty, who died of old age, the lining membrane of the stomach was also of an ash-colour, that of the duodenum white, with a slight tinge of yellow, that of the jejunum, ilium, colon, and rectum, whitish, and that of the cæcum grayish. M. Billard, from whom we have taken these two facts, places among the colorations to be considered as cadaveric, where the gastro-enteric

mucous membrane is healthy, yellow patches of greater or less extent, or simple bands of the same colour on the mucous surface of the duodenum and jejunum.

(To be continued).

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The London Medical

AND

Surgical Journal.

Saturday, July 11th, 1835.

PROGRESS OF DIFFERENT CLASSES IN
THE PROFESSION.

Ἰκανὸς οὖν ἔχομεν τοῦτο, ὅτι πάντα οὕτω
γίγνεται ἐξ ἐναντίων τὰ ἰκαντὰ πράγματα.

PLATO.

SOCRATES, or rather Plato speaking in his name, tells us that everything springs from its opposite: that everything good is an amelioration of something bad, and everything bad a deterioration of something good. This is rather a large position; the principle, however, holds true with reference to many things, and among others to the state of the medical profession in our own country. It is sufficiently obvious, at the present moment, that the *heraldry* of the profession is at direct variance with the real state of things, and also with the opinion of the better informed portion of society. Thus the physician ranks higher than the apothecary, but the latter is generally the superior man; the fellows of the College rank higher than the licentiates, but are, in reality, miserably inferior to them; yet the English physicians were at one time deservedly held in the highest estimation, and among these the fellows of the College had an unquestioned ascendancy; while the apothecaries were originally nothing more than a set of quacking druggists, who exercised illegally an art of which they were ignorant. Now it is profitable to inquire into the causes which have led to so singular an inversion. The altered relation of the physician and apothecary has, we conceive, arisen from the former having been fettered by an absurd

prejudice which has not had equal influence on the latter. Several centuries ago the distinction between physic and surgery was of little moment, because surgery was then merely a rude and mechanical art; but as the art gradually improved into a science, and became intimately allied to physic by a community of principles and a reciprocity of illustration, the evils resulting from their arbitrary disjunction began to be very perceptible, and these evils have weighed much more heavily on the physician than the apothecary: the former, restrained by scholastic rules, has studied and practised one half of his art violently severed from the other, and thus removed from the common physiological basis on which both ought to stand; the latter, at once deprived of the advantages, and free from the trammels, of academic education, has acquired knowledge how he could, and thus, approximating more to the position of an original observer of nature, has learned to despise a distinction equally false in reasoning, and injurious in practice; and has gradually improved into the British general practitioner of the present day, who only requires to be emancipated from the *trade*, to become the most respectable medical character in Europe. We have said nothing about pure surgeons, because we consider them as mere artizans having no connexion with the profession of medicine—we do not deny, however, that several most distinguished men have the misfortune to be numbered among this class of mechanics.

But, setting aside general practitioners, we have asserted, and without much fear of contradiction from unprejudiced persons, that the fellows of the College who arrogate to themselves, and are supposed by some weak people to possess, a superiority over other physicians, are in effect very much inferior to the greater number of the same class in this country. Whence then is this

inferiority? There is no question that the fellows of the London College of Physicians were formerly not only the first physicians, but among the first *men* of their age. Linacre, the founder of the College, might have confided his immortality to letters, even though he had been unknown in medicine. In later days, Mead and Friend were among the most distinguished cultivators and patrons of literature. Now it is to this very superiority of learning in the fellows of the olden time, that those of the present day owe their degradation. Learning is a thing not easily estimated, because the multitude are unlearned; medical knowledge is not easily appreciated, because the multitude know nothing of medicine; hence the existing generation of fellows, resting their reputation for learning *on the erudition of their predecessors*, and their character for medical skill *on the ignorance of the public*, are contented to enjoy, in dignified indolence, the prescriptive privileges of their order, and to labour under a real inferiority to the great mass of European physicians.

We may perhaps be accused of unfairness to the fellows of the College, in thus denying the superior learning which they so pompously assert, and others too credulously admit. Our answer is “by their fruits shall ye know them.” What have they produced? The few learned works connected with medicine achieved in the present day belong not to them. Will any of their body show us a classical work equal to Milligan’s *Celsus*? Dr. Milligan was of Edinburgh. Will they show us a work comparable in general research to Copland’s *Dictionary*? Dr. Copland is not a fellow. Will they shew us a work as rich in medical antiquity as Adam’s translation of Paulus *Ægineta*? Mr. Adams is a surgeon, residing in some place so obscure that its locality is unknown to us.

What are the practical precepts to b

derived from all the foregoing considerations? What but the necessity of preventing any body of men from mystifying society with a *name*, by the appointment of a competent and equitable board of examination, which shall determine the qualifications of *individuals*, without reference to the privileges of orders, or the fame of predecessors; the necessity of emancipating the general practitioner from those restraints in despite of which he has become the best informed and most useful member of the profession; and the necessity of placing all members of the profession on a high level of honourable equality, where merit will create for itself, and the respect of society will create for it, distinctions of a nobler kind than those conferred by the present *natural history* system of medical politics, wherein doctors are arranged in classes and orders, like plants or minerals, according to their external characters!

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A QUARTERLY contemporary of ours has, we are told, said something contumacious of us; we do not know exactly what it is, for we have not read his journal. We have always felt amicably inclined towards the journal in question, from the respect we bear to its editor, and we shall therefore say nothing disagreeable on the present occasion; but we particularly request our contemporary to let us alone in future, or we shall be under the unpleasant necessity of alluding to his glass tenement.

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Hospital Reports.

WESTMINSTER HOSPITAL.

Calculus in the Bladder.—Lithotripsy. Nine ounces extracted.

(Case of Mary Kean, continued from p. 158).

Our readers will recollect that in this case lithotripsy had been performed by Mr. Guthrie, in February last, and that a large quantity of fragments of a calculus, amounting

in weight to between seven and eight ounces was brought away.

At the period of our last report, dated February 23rd, the patient was going on well, her general health had decidedly improved, and it appeared probable that she would soon be well enough to leave the hospital. She had, however, lost all power of retaining the urinary secretion, from the injury which the urethra had necessarily sustained during the operation. Dr. Henry Davies, who saw her at the request of Mr. Guthrie, we understand, expressed his opinion that it would be some months before she recovered the power of retention.

For several weeks after this operation, she appeared to be gradually regaining her strength, and to be doing as well as could be wished, particularly as she did not complain of any local symptoms. But towards the latter end of April, or early in May, she did not make so much progress towards amendment, but had deranged digestion. It was thought that change of air might be of use to her, and she accordingly was allowed to go into the country for a few weeks.

June 6th. She has now returned, and appears rather worse than when she left. She complains of severe pain in the region of the bladder, passes bloody urine frequently, and the other day she passed a fragment of calculus. It has since been ascertained by Mr. Soden, the house-surgeon, that a considerable piece of calculus remains in the bladder, which will probably require breaking up, before it can be removed. The fragment of calculus passed weighs about thirty grains, and evidently consists of a nucleus of the original calculus of lithic acid.

15th. Has less pain than at last report; continues to pass at intervals very small calculous fragments. Mr. Guthrie, who saw and examined her yesterday, says that he is unable to decide whether a new calculus has formed, or whether it is a portion of the old one which remained after the operation.

23rd. She appears better than when she returned from the country; has passed very little bloody urine lately. This improvement has taken place under a course of *pareira brava*, and *morphia*. She has used the sponge tent, to dilate the urethra, once, with the view of having the calculus removed.

25th. The sponge tent was introduced into the urethra this morning.

Mr. Guthrie, with the assistance of Mr. White, in the afternoon, proceeded to remove the calculus, which was readily enough accomplished. It did not require to be broken up, and was extracted with a small forceps, without occasioning much pain to the patient. It was a large oblong piece of calculus, and weighed about an ounce and a half, thus making the total weight of the calculus about nine ounces.

27th. Looks much better since the calculus was extracted. Her appetite improves,

and the local pain and inconvenience are quite relieved. Of course the incontinence of urine remains.

29th. Very small fragments of calculous matter, of the size of pins' heads, have come away since the operation; but it has been ascertained, by a careful examination, that all the calculus has now been removed. She continues to improve in her general health.

Hysteria—Constant Abduction of the Little Finger—Aphonia, &c.

Mary Vaughan, aged 16, was admitted into Percy ward, April 22nd, under the care of Mr. White.

It appears that a day or two previous, she had fallen down stairs, and received an injury to the little finger of the left hand. A difference of opinion exists as to the nature of the accident; some of the gentlemen who saw her when she first came to the hospital, state that an actual dislocation of the finger outwards had taken place, and that the head of its first phalanx rested between the distal heads of the two inner metacarpal bones; which luxation they believe to have been reduced by the house surgeon, Mr. Soden. Others deny any such dislocation having occurred, and consider the accident to have consisted merely in a severe sprain, affecting the ligaments, with perhaps a rupture of one or more of the tendinous sheaths, and a consequent displacement of the tendons; and this certainly would appear the more probable of the two. However this may be, the finger remains in a state of constant abduction, notwithstanding that its head is now in the right place. A roller has been applied, and in this way the finger kept in its proper situation, but although this has been persisted in during several days, immediately upon its removal, the finger regains its abnormal situation.

In addition to this, she has had, during the last two months, a great degree of aphonia, and at the present time never speaks louder than a whisper. She says she has not been well for three months, lost her appetite, and had a furred tongue, for which she had been under medical treatment. The catamenia have never been completely established; the first time she menstruated was six months ago, and she has had three scanty "shows" since, the last a fortnight ago. Although these anomalous symptoms may legitimately enough perhaps be considered as manifestations of hysteria, yet there do not appear to be any of the symptoms usually regarded as pathognomic of this affection. There have been no convulsive attacks, nor does she complain of the "globus hystericus." Mr. White has ordered her to take assafœtida, and the following has been prescribed.

Rx. Tinct. assafœtidæ, 3 iij;
Aq. menthæ pip. 3 viij;

Misce.

Capt. Cochl. ij. ter quotidie.

May 9th. She complains of pain in the arm, especially upon pressure. The finger remains as before.

13th. During the last two or three days has had great pain in the larger joints, attended with thirst, loss of appetite, furred tongue, flushed countenance, and other symptoms of acute rheumatism. She has been ordered to omit the assafœtida mixture, and to take the "mistura diaphoretic" of the hospital. The aphonia continues unmitigated.

16th. The rheumatic attack has been nearly subdued, but the abduction of the little finger returns as soon as ever the bandage is removed; the aphonia is as at last report.

June 6th. Much the same. Complains of stiffness and tenderness of the arm, extending upwards from the hand. She is directed to take exercise in the open air daily.

15th. Much the same, both as respects the finger and the voice; she is taking effervescing saline draughts daily.

29th. Little or no improvement either in the finger or voice; there is great tenderness of the left arm and mammæ, the latter of which has during some time been somewhat swollen. The amenorrhœa continues. The tongue is flabby, covered with a white fur, dotted with red papillæ, and surrounded with a red border and median furrow.

Rx. Mist. ferri. comp. 3 j ter die.

July 3rd.—The same as at last report. She is to become an out-patient, the case being one of that description in which but little benefit can be obtained by medical treatment.

Errata in last report.

No. 179, p. 733, for diastysis read diastasis.

735, for Mr. Snowdon, read Mr. Soden.

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NORTH LONDON HOSPITAL.

Secondary Syphilis, successfully treated by Hydriodate of Potash.

ELIZABETH FITZGERALD, aged 19, was admitted May 26th, under the care of Dr. A. T. Thomson. She has frequently been affected with gonorrhœa; and about two years since contracted syphilis, for which she was treated, for four months, in one of the London Hospitals, and left it apparently cured. Two months ago a syphilitic eruption appeared on the face, and spread quickly to the eyes, causing an inflammation and swelling of the eyelids, and impairment of vision. The eruption extended subsequently over the head and the whole body. There is no swelling or ulceration of the genitals—no soreness in the groin, and no discharge.

Previous to her admission she had taken a purgative, which acted powerfully. She was ordered—Potassæ hydriodat. gr. v. ter in die. The head to be shaved.

29th. Somewhat better, but still pain and swelling in the lids of the left eye.

June 1st. Increased the dose of the hyd. of pot. to $7\frac{1}{2}$ grains; milk diet.

3rd. Eruption disappearing from the head.

12th. Still improving; but she complains of a pain over the sacrum, and some leucorrhœal discharge; to be cupped to 3 viij .

17th. Eruption nearly gone. The roots of the alæ nasi are very sore. She was ordered to inject a weak solution of the oxy-muriate of mercury.

23rd. Has continued to improve since last report; the nose much better.

30th. The eruption quite gone.

Erysipelas Phlegmonodes.

Thomas Simmonds, aged 35, of most intemperate habits, was admitted, June 11th, under the care of Dr. Elliotson. In consequence of catching a severe cold, he had inflammatory sore throat, implicating the velum pendulum palati, and the tonsils, especially the left. Twelve leeches and a cold lotion were applied, and a purgative given, which in some measure relieved the throat.

June 12th. The absorbent ganglions on the left side of the throat were considerably enlarged, and a small abscess had formed, burst, and discharged a considerable quantity of offensive matter.

15th. Much better; but complains of severe rheumatic pain in the right elbow; twelve leeches to be applied to it.

17th. The glands are still swollen; he states to day, for the first time, that they are always enlarged; he was a little delirious towards the evening; pulse 70, strong; bowels open. The head to be shaved, and a blister to be applied to the occiput and back of the neck.

18th. Has passed a restless night; is feverish, but does not complain of any pain in the head. As the delirium was supposed to arise merely from irritability, two grains of opium were administered, which completely tranquilized him, and he passed a good night. On the 18th, the abscess was opened, and a quantity of good pus evacuated. The pupils seemed contracted, and the eyes very prominent. Sulp. quin. ter die.

19th. Attacked to-day with erysipelatous inflammation in both arms and legs, which are much swollen; there is considerable fever; bowels are open. Cold solution to be applied, and the opium repeated.

20th. Has passed a restless night; the fever undiminished; complains of tenderness at the epigastrium. A line was drawn across the arms with nitrate of silver, with the intention of stopping the progress of the disease. Dr. E. remarked that he should have also applied it to the diseased parts themselves, had they not have been so painful.

22nd. Seems better, but still very restless; the nitrate of silver has stopped the extension of the inflammation; he is not delirious; but there is a degree of wildness about his eyes. His bowels have been freely opened, and the fever has considerably abated. Ordered to have beef tea and porter; and as the inflamed surface is abraded in several places, zinc ointment to be applied to it.

25th. He seemed to be gradually improving, the inflammation being rather less; his pulse, however, was weak, and he had an attack of diarrhœa, which was relieved by a mixture of chalk and kino.

26th. Erysipelas not increased in the arms; they are soft and swollen, but no fluctuation can be felt: pulse 120, but exceedingly weak: talks incoherently every now and then: the erysipelas has quite disappeared in the legs: he was ordered half a pint of white wine. The abscess has continued to discharge ever since it was opened. About four o'clock this afternoon he was suddenly seized with a severe spasmodic pain in the chest, with dyspnœa: he rapidly got worse, and died at 9 P. M.

Sectio Cadaveris forty-two hours after Death.—On cutting into the affected parts, the cellular tissue was found broken down, and a considerable quantity of thick pus escaped, mixed with a sanious fluid. This pus had become infiltrated between the muscles, destroying the intermediate septa, and in some places the muscular fibre seemed broken down. These appearances were particularly observed in the left arm; the other extremities were also affected in a similar manner, but in a less degree. There was nothing particular in the head, except that the scalp was rather œdematous. The lungs were healthy—there was a small quantity of bloody serum in the pericardium—the heart was healthy, but the left ventricle was slightly thickened. The abdomen healthy. The abscess in the neck was found quite gangrenous.

Dr. Elliotson remarked, that he believed the plan of treatment he had adopted, was, under all the circumstances, the most proper for the case. He believed that if blood had been taken, the man would not have recovered—he was of most dissolute, intemperate habits—he had been some time in the treadmill, which indeed he had just left. This no doubt had added considerably to the debility engendered by a dissipated life, and antiphlogistic treatment would have destroyed him. It is most likely that had he succeeded in curing the arms, legs, and throat, erysipelatous inflammations would have come on in some other part of the system, and carried him off.

LUNATIC ASYLUMS.—TREATMENT OF THE INSANE.

To the Editor of the London Medical and Surgical Journal.

SIR—You are fully aware that mental aberration is often the disease of genius, sensibility, and virtue—a consideration which ought to animate all to aid in the removal of this affliction, not only on such grounds, but on the general principle of humanity. With these sentiments, it is gratifying to find that this subject, as well as that of mad-houses, has engaged your attention; because you possess the capacity and the means of being useful to a class of men heretofore doomed to encounter the greatest difficulties and privations. I concur with you in thinking that physicians should not allow themselves to become the proprietors of mad-houses, because in so doing, they become tainted with a trading spirit, and thereby sink the dignity of their profession, and thus probably lose that sensibility and high sense of honour so essential in this department of the medical profession, towards securing a successful exercise of their talents. The physician should be at once the medical attendant, the guardian, and the advocate of the deranged, obligations altogether inconsistent with the character of the proprietor of a madhouse, as the faithful performance of these elevated duties assumes a very questionable shape, when the physician himself is found the proprietor of such an establishment, because his interests are opposed to his professional fame, particularly when the patient happens to be wealthy. The learning, the humanity, the liberality, and dignity of sentiments become tarnished by being placed under such suspicious circumstances; however, I see no reason why medical men should be absolutely interdicted from so employing their time and their talents. The great object is to render those who become proprietors of such institutions faithful in the performance of their duties; and this can alone be accomplished by the appointment of inspectors of lunatic establishments, whose sole office shall consist in visiting one or other of the madhouses under their control once in twenty-four hours, and at any hour, night or day, that may be deemed necessary, as it is during night that the most disgusting scenes present themselves, and consequently requiring correction at some of these establishments. In short, let efficient inspectors be nominated, because as these appointments are at present arranged, they are worse than useless. Would the commissioners of poor laws be of any use, were they allowed to take fees or solicit patronage from the establishments they inspected? The inspectors of lunatic institutions, besides ascertaining that the proprietors did their duty, should also see that the friends of the deranged fol-

lowed a becoming course. Many of the lamentable scenes of these institutions spring from the neglect or avarice of the friends of the lunatic, and not from the system itself. I have remarked with pain, that the recovery of the deranged patient, when under treatment, was quite a secondary consideration, when compared with the expense of its probable attainment, which expense alone occupied the minds of those who were his heirs, and who consequently ought to have been the anxious promoters of his restoration to mental health; but let me also, for the credit of human nature, state that numerous instances of sympathy, of generosity and affection, have come under my observation, and it is to control the former and animate the latter, that arrangements should be made. Those maniacs who possess the means, and while good bodily health exists, should not be abandoned as incurable; medical aid should be persisted in, whatever the duration of the disease may be, as such perseverance will tend to diminish the number of the insane. Such a system of inspection would ensure attention to the patient from his physician and his friends, as it would enforce the necessary application of the maniac's wealth towards this paramount object; and when the restoration of his mental faculties should appear unattainable, it would procure for him kindness and humanity under this dispensation, so signal and afflicting. It is probably unnecessary to observe that the physician appointed to the office of inspector should have been a careful observer of the diseases of the mind, and should not be allowed to practise at any madhouse. The present system of tolerating those who inspect and control madhouses to be employed by their proprietors, is objectionable in the highest degree, and to my mind has been lamentably injurious to the interest and recovery of the insane.

Here, evils appear not only to have originated, but to have increased to an extent calculated to shake the public confidence as to the present system. No individual ought to be committed to a madhouse on the certificate of two medical men, as such a measure, involving more than life, should be preceded by an inquest consisting of five, two of whom should be non-professional men. The maladies of the mind have increased, are increasing, and will shortly arrive at a frightful state, should some steps not be taken with the view of opposing the progress of this hydra, more terrible than the visitations of Egypt, when under the Divine displeasure. The late Mr. Rose was the author of the Savings Banks, and he also took great pains in this department of human misfortune, which efforts claims for his memory, national gratitude; but what would be his mortification, were he to return to life and find that legislation has not as yet been instrumental in stopping this horrible on-

slaught and degradation of the human mind, and that nothing had resulted from his exertions but a sordid system of profligate jobbing and patronage? Hanwell appears to have originated in this spirit, and the genius of corruption and jobbing seems to have governed every step of the erection of that asylum.

That edifice, built at so much expense, ought to have been rendered instrumental in opposing the progress of insanity; but instead of which, it has been converted into a workshop for making straw hats, and allowed to be occupied by incurables—an arrangement exhibiting a gross and culpable indifference to the interests of science and humanity.

I have the honour to be
Your most obedient humble servant,
PHILO DEMOCRITUS.

The animadversion of our valued correspondent is perfectly just, as nothing can be more reprehensible than the system pursued in this country for the medical treatment of the insane. The medical commissioners have as yet proposed no suggestions or rules for the treatment of the unfortunate inmates of lunatic asylums, and so far as we know, do little more than pocket their salaries. But this might be expected from individuals selected by private interest, who had neither experience nor observation as to the nature or treatment of the disorder of the unhappy persons committed to their superintendence. The appointments of these commissioners was a government job, and those in power preferred their friends, without once inquiring into their competency.—ED.

M. VIREY ON THE GENERATION OF ANIMALS AND PLANTS.

(Continued from page 608.)

THE boundaries of the universe would become too confined, if we supposed this reproductive power active in all its sources, without anything to arrest it; because nature is impetuous in reproduction, on account of the inconceivable attraction of pleasure, so that the equilibrium of the universe could not subsist without the power of destruction, which re-establishes the level or medium of all beings.

But happily the power of reproduction is more limited in the human species, though sexual union is more frequent than between other animals; and we see in this that which is in favour of nature.

Each of the two ovaries of the human female contains from fifteen to twenty ova or eggs; and very few women have had this number of infants. I have never heard or read of a woman who reared more than twenty-one children, but I have known one who had twenty-seven, and another thirty-two, including abortions and premature births.

This last was a woman who was under my care at St. John's Hospital. She was of a sanguineous temperament with auburn hair. She had twins twice, triplets once, miscarried twice of twins, had a child eight months after marriage, twins in seven months afterwards, twins dead at the full time, twins again, one dead the other alive, and now aged 23 years. One of her sisters had only one child, and the other no offspring. Her husband, his brother, and near relations, have had large families, from twelve to eighteen children.

An interesting fact presents itself to the mind, in this stage of our inquiries—Were all the ova of the human race contained in the ovaries of [the first of our species? This question is involved in impenetrable obscurity, and will perhaps for ever remain so. Admitting for a moment, that there were originally a vast number of the human species, which is contrary to divine revelation, what an incalculable number of transmigrations of ovaries and ova there would have been in the successive reproduction of our species since the creation! What differences of constitution! what innumerable imperfections and hereditary diseases! A more correct idea of these will be formed after we describe the influence of temperament, health, disease, climate, season, food, habits and civilization, over fecundity.

It may, however, be remarked, that fecundity is greater with man than with woman. Pregnancy, the puerperal or child-bed state, and lactation, are opposed to reproduction, but a husband might, if the laws of morals, religion, and society, permitted, engender with numerous healthful women during these states. It is also to be borne in mind that the male is more robust and free from diseases than the female, and that he enjoys the generative faculty much longer. Women seldom have offspring in temperate climates, after the age of 45 or 50, when the menstrual function ceases; while men continue to propagate until the age of 65 or 80, and even later, of which there are numerous and daily examples. A very remarkable instance was lately recorded in the public press, (1832 or 33), of a Scottish gentleman, who had 57 illegitimate children by different women; he died intestate, and possessed of a large property, none of which came to his numerous offspring. The generative faculty continues longer with men. Thus, Thomas Parr married at 120, and performed his conjugal duties so well at 140, as to make him forget his old age. He died full of vigour at 152, not of disease but plethora.

M. Virey gives the following account of fecundation and fecundity, in the *Dict. des Sciences Medicales*, which I abridge:

Epochs of Life when Fecundity commences and ceases.—It is generally observed, that women begin to lose their fecundity from the age of 42 to 49. This faculty diminishes in men, from the age of 50 to 60 years, but it

may exist for some years later. These periods are not rigorously exact, though generally so; but climates, passions, and modes of life, cause many modifications. The eastern people, for example, arrive at puberty from the ninth to the twelfth year, and the faculty of procreation ceases at the age of 25 or 30, when they require most powerful excitants to render them capable of performing their conjugal duties; whilst the women cease to be fecund at this period. The northern people become puberous much later, and preserve the faculty of engendering for a longer time. It is not rare to meet with women in cold climates, who engender at the age of 50, and men from 65 to 80 years of age.

Is there a genital season for man? It has been generally supposed that man is not subject to the influence of the seasons in the exercise of his genital functions; in fact, he enjoys this faculty in all seasons, latitudes, and temperatures. Nevertheless, certain physical influences of the air, aliments, mode of life, render certain seasons of the year more prolific than others.

Conditions necessary for Fecundation.—It is the general opinion of physiologists, that in order to give the act of fecundation all the perfection possible, it is necessary, independently of a good constitution and perfect health, and the integrity of the genital organs, that the mind of both man and woman should be completely absorbed during the act of sexual union, for otherwise the offspring will be feeble and delicate, as we observe in the children of those who are altogether enfeebled by excessive labour. The sons of illustrious men are in general unworthy their parents, while we observe on the contrary, that men who have become celebrated by character for genius, valour, &c. have been the fruits of a pure or ardent love, were adulterous or illegitimate, and have had parents whose physical power predominated. The whole soul is directed to one function during the act of generation, and every organ in the body is excited. Every one knows the power exercised by the imagination on sexual congress; a look, a word, a sigh, a whisper, a touch, will exalt or diminish amorous impulse. A vast deal has been written on procreation, but the secret of generation has never been discovered, and the only satisfactory conclusion arrived at is, that there must be a union of the sexes. All physiologists agree, that both sexes contribute to the formation of the new being.

In those countries where the people live without wars, emigration, or laborious employments, but enjoy naval and other commerce, which so remarkably benefit man, there is a superabundance of males among the monogamous, more especially in cold climates, where it is infinitely augmented. There results a less proportion of women to men, polyandri is established, and the male sex predominates. This predominance is observed in all northern nations,

and wherever Europeans pass into other countries.

Causes which favour Fecundation.—The causes which favour the increase of population are the quality, quantity, and species of aliments, the climates, modes of life, occupations, habits, temperaments, &c.

An abundance of nourishment augments the number of men and animals. The years of prosperity are remarkable for the increase of births, the years of scarcity or famine for the diminution. Fecundity is greater in cold than in warm climates. The Icelanders have from fifteen to twenty children, the English and Germans six or eight, the French four or five, and the Spaniards and Italians only two or three. There are, however, individual exceptions, some as regards climate. Thus, for example, the African negresses are remarkably fruitful; and in Egypt women have often two or three infants at one birth.—*Encycloped. Methodique.* It was remarked by Baron Larrey in his *Chir. Militaire*, that several women who followed the French army to the east, and who had no infants in Europe, became pregnant after the use of the baths in Egypt. Other historians and travellers have attributed to the waters of the Nile the great fecundity of the Egyptians. This faculty of procreation extends to animals, and depends more upon the perfect uniformity of the temperature, than to any virtue in the water of the Nile.

The contrary opinion is believed by the credulous Mussulman, and even in the southern provinces of France. M. Renoult informed M. Virey, that on the return of Captain Roustau, in 1801, who sailed several times to the Levant and Egypt, the women of Toulon applied to him and purchased some of the waters of the Nile, on account of their reputed fecundating powers.—*Lett. Des Sciences Medicales, Art. Fecondation.*

It is generally either immediately before or immediately after menstruation, that women are most likely to become pregnant. In either condition there is a determination of blood to the uterus. This is necessary for the periodical secretion, and after this is completed the organ is more sensible and vascular than at other times.

It is held that fecundation is effected with more facility when both individuals are intent upon this object; but it often happens that procreation is accomplished when the parties had their minds occupied in other matters, or when neither desired it. Every obstetrician has been consulted by women who were unconscious of the date of conception; and hence the frequent mistakes made in "reckoning;" women often exceed the time at which they expected delivery, sometimes two, three, four, or six weeks, and even longer. According to writers on medical jurisprudence and obstetrics, there are no moral or physical sensations which enable a woman to know the moment when she became pregnant.

It has been long remarked that fine women are not so fecund as others; but there are some exceptions.

A difference of temperaments between the sexes, a defect of love, antipathies, disgusts, infirmities, a state of delicacy, or whatever opposes cohabitation, excessive corpulency, or thinness, excessive exercise of the mind or body, vivid passions, intemperance, the abuse of venereal pleasure, render both less fitted for the function of generation. The multiplication of the species is prevented by an excess of amorous pleasure.

It has been long observed that the multiplication of the species is diminished where enjoyment is easy and repeated.

Clothing, occupations, different kinds of exercise, have a certain influence upon this faculty. Atrophy or wasting of the testicles may result from tight clothing, and these organs, when compressed by much horse exercise, become completely wasted, or reduced to a state of nullity. The Scythians were impotent from this cause, as attested by Hippocrates: who said, "*Cur multi Scytharum eunuchi, ac ad coitum impotentes.*"—*De aere, locis et aquis.* The Tartars and Arabians are often sterile from too much horse exercise.

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COURT OF COMMON PLEAS, DUBLIN.

Monday, June 15th, 1835.

HUGHES v. MARSH.

Extraordinary Medical Charges.

THIS was an action, brought for the sum of 4,737*l.* 15*s.* 3*d.* by an apothecary, for medicines and attendance, according to his counsel's opening speech, from 1832 to 1835. The plaintiff's brother, however, proved that the attendance and supply of medicines commenced in 1828. It also appeared that the defendant was regularly attended by Mr. Wilmot, one of the professors of surgery in Dublin. The defendant's counsel then read a part of the plaintiff's bill of particulars. "It appeared that the charges in the bill for one year amounted to 3,597*l.* 15*s.* 3*d.*, and for a month, to 485*l.* 19*s.* 5*d.* Eight enemas were charged for in one day, at 10*s.* each; 3*l.* 10*s.* for one day's attendance; and three guineas for a night. There were 1703 attendances charged for, and for administering enemas, 1,119*l.* 15*s.*

Mr. Wm. Halliday, a late director of Apothecaries' Hall, considered the bill moderate, while Mr. Halahan and Mr. Leech considered the bill high and exorbitant.

Verdict, for plaintiff, 800*l.*

In the whole course of our experience, we have never heard of so exorbitant a bill as the above. Nearly 5,000*l.* for three years' attendance, and medicines furnished by an apothecary! In one year the charge is 4,000*l.* less by five shillings and ninepence! And only think of all this medicine, with 3*l.* 10*s.*

for a day's attendance, and three guineas for a night's. And lastly, 1,119*l.* 5*s.* for administering enemata!!! Certainly if Mr. Hughes has many such patients, he must make a rapid fortune, unless a few juries should estimate his charges more moderately.

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REFORM IN THE COLLEGE OF PHYSICIANS.

The fellowship is now thrown open to all licentiates of four years' standing, and these are to be elected by a Council, which are appointed by the President and Fellows. Candidatureships are abolished, and every one who applies for examination, must have studied five years, and have three years' hospital attendance.

These rules are of little value, and cannot render the College popular, or increase its friends.

OUR PLATES.

We this week commence our plates of Medical Botany, in alphabetical order, and shall insert letter-press when the subject deserves it. There can be nothing said on the *acacia vera*, which may not be found in any work on *materia medica*.

BOOKS.

Supplement to Obstetric Tables; comprising graphic illustrations, with descriptions and practical remarks, exhibiting, on dissected plates, many important subjects in midwifery, by G. Spratt, Surgeon Accoucheur; Part II. Plates. London. 1835. Churchill.

This is a very instructive work to every student and obstetrician. The part before us contains eight tables, exhibiting thirty-five obstetric views, and principally of practical subjects. Two of the tables very clearly illustrated ovology and embryology, others shew the genital organs, and the size of the uterus and mammae, at the different periods of uterogestation, more placental presentations, the operation of version or turning, and lastly craniotomy. The other subjects have been delineated in the first part of the work. The author is entitled to great praise for the manner in which he has executed these plates, and they are the work of his own hands. To those who are commencing the study of obstetrics, and to those who have been self-instructed, Mr. Spratt's work will prove extremely instructive and valuable.

Lectures on the Diseases of the Lungs and Heart, by Thomas Davies, M.D., &c. &c. 8vo. pp. 512. Longman and Co.

This work contains all that is known on diseases of the lungs and heart, and will be one of reference and authority.

An Essay on the Nature of Diseases. By A. Green, L.L.B., 12mo. pp. 52. Simpkin, Marshall, & Co.

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VOL. VII.

LECTURES
ON THE
INSTITUTIONS OF MEDICINE,

DELIVERED BY JOHN FLETCHER, M.D., F.R.C.S.E., AT THE ARGYLE SQUARE SCHOOL OF
MEDICINE, EDINBURGH; SESSION 1834-35.

LECTURE XXV.

*Various Doctrines of Sympathy considered—Evidences of the Passage of Sympathies by the
Respiratory System of Nerves (continued).*

III.—THAT the influence of the respiratory system of nerves would not be interrupted by sleep or coma might almost have been anticipated from a knowledge of the origin of the respiratory tract in the tuber annulare; and hence the persistence of respiration and the other sympathetic actions, properly so called, not only in natural sleep, but even in apoplexy, till the disease has reached this justly reputed citadel of life, when the extension of the primary irritation of the lungs along the pneumogastric nerves to the common centre of the respiratory system, and thence to the nerves distributed on the respiratory muscles, being thus intercepted at the summit of this common centre, the fundamental vital action is stopped, and death is the result. Upon the same principles, of the comparative independence of the respiratory system of nerves upon the brain, is to be explained the occasional respiration, for some time after birth, of acephalous infants, provided the origin of the pneumogastric nerve is entire, but not otherwise (a); and even the continuance, as lately observed, of some other sympathetic actions after the artificial removal of the greater part of the brain. It is hardly necessary to observe that, although sympathy, properly so called, is thus independent of the brain, passion or instinct, originating as it does in a primary irritation of that organ, cannot be so—the respiratory nerves are ready to convey this irritation, but they cannot convey what is not imparted to them.

IV.—With respect to the correspondence, in all classes of animals, of the development of the respiratory system of nerves, and the manifestation of the stimulus of sympathy, and passion or instinct, this argument in favour of the theory under consideration seems to be in general well founded. It has been already remarked, that in some of the invertebrate tribes rudiments of a distinct respiratory tract have been lately detected (b), giving rise to nerves coming off by single roots, between the double roots of the regular nerves, precisely in the same manner as in the human body, and that these nerves seem to be distributed principally upon the respiratory apparatus, so that in them, as well as in the higher tribes of animals, respiration appears to be effected by sympathy. So obscure are these nerves that it is impossible to say to what particular respiratory nerves of the vertebrate animals they correspond; it is probable, however, that they answer only or chiefly to the pneumogastric, and that it is by the association of the different portions of this nerve, at its common origin, that the sympathy between the organ corresponding to lungs and the active instruments of respiration is maintained. Such appears to be the stimulus to the action of the muscular cloak-bags of the fresh-water mussel (c) (*Mya*, 7), and cuttle-fish (d) (*Sepia*, 10), and the muscles moving the shell of the bivalve mollusca in general; as well as to that of the muscles which move the plates of horn which surround the gills of the cray-fish (e) (*Cancer*, 16), and the elytra or abdominal wings, under which lie the principal stig-

(a) Brâchet (Sur les Fonctions de Syst. Nerv. Gangl. 1823).

(b) Newport, (Phil. Trans. 1833-34).

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(c) Carus, pl. ii, fig. 11.

(d) Carus, pl. iii, fig. 2.

(e) Carus, pl. vi, fig. 4.

mata of some insects, as some kinds of beetle (*Scarabæus*, 24), and grass-hopper, (a) (*Gryllus*, 25), and perhaps also the stigmata themselves of some others, as the silk-worm (b) (*Phalæna*, 20). In as far then as the respiratory process of the invertebrate tribes of animals is active—for this is by no means always the case—it seems to be effected on the same principles as in the vertebrated, and the development in them of the respiratory system of nerves appears, in a great manner, to correspond to this their chief manifestation of proper sympathetic action. The display of passion and instinct, indeed, by some invertebrate tribes, in the acceleration of the action of their heart or corresponding organ, the increase or vitiation of their secretions, and the perturbations of their movements in general from violent emotion, as well as in the ordinary actions of taking aliment, of discharging excrement, and of copulating, and the more extraordinary ones of selecting each its proper kind of food, of hoarding up grain, of depositing its eggs only in certain places, of choosing the proper element for its locomotion, of migrating, and of constructing the curious fabrics elsewhere alluded to, is much more remarkable than that of sympathy, properly so called; but not more so than the presumed general distribution of the pneumogastric nerve—supposing their respiratory system to be confined to this—seems to be quite competent to account for. We must remember, moreover, that the instinctive actions of the invertebrate animals seem to be numerous and striking, only because their rational actions are few and ambiguous—they are relatively, not absolutely remarkable, and not at all disproportioned, perhaps to the development in them, obscure as it is, of the respiratory system of nerves. But it is in the vertebrated tribes principally that this correspondence between the development of the system of nerves in question, and the manifestation of sympathy and passion or instinct is observable. The first respiratory nerve, as we ascend in the scale of animals, capable of being recognised as decidedly corresponding to any one found in man is the pneumogastric, which is met with in fishes, and which, as standing in them, in the place of almost all the rest, is of very great size. It is by this nerve principally that, not only their gills, but the muscles of their jaws, fauces and thoracic ribs, which it was necessary should sympathize with the gills, in the process of respiration, as well as those of the gill-flaps, which are in like manner, instrumental to expiration, are supplied; and a further reason for the great size of this nerve in fishes is perhaps to be found in the very laborious nature of their respiratory and other sympathetic and instinctive actions, as effected in so dense a medium as water. Fishes evince few other striking examples of proper sympathetic action, with the exception of that of the heart and stomach—both which receive their nerves likewise from the pneumogastric—with every organ of the body; but their motions under the stimulus of passion or instinct are numerous and remarkable. Of this we have examples in the change of colour—analogue perhaps to blushing—which many fishes, as the perch, (*Perca*, 28), and stickleback, (*Gasterosteus*, 28), undergo from emotion; as well as in the increase and vitiation of their several secretions, by means of which it is probable that the diodons and tetrodons inflate themselves when irritated, so as to render all their spines erect, and in the violent instinctive movements by which many species of fishes, of the genera *Scarpa*, *Perca*, *Trachinus*, *Trigla*, *Raia*, &c. inflict sometimes severe wounds on their aggressors—to say nothing of the more ordinary instinctive actions which they perform in common with animals in general, or of those more extraordinary, by which their migrations and other habitual processes are effected. To all these the very extensive distribution of the pneumogastric nerve, as well on the external, as on the internal organs of fishes seems quite adequate; and it is strongly in favour of the presumption that it is by means of this nerve that the stimulus of passion or instinct in general is in them conveyed, that the electrical apparatus of such fishes as possess one, like the electrical eel, (*Gymnotus*, 26), the electrical silure, (*Silurus*, 29), and the torpedo, (*Raia*, 31), which is well known to be so much under the influence of this stimulus, is supplied principally by an immense branch of the nerve in question. The only other proper respiratory nerve possessed by fishes is the pathetic, which seems, in all, to be subservient to effecting the sympathetic motions of the iris, as well as in those fishes in which the eye-ball is moveable, to regulating the motions of this organ under excitement. It is not till we come to reptiles that we meet with, in addition to a pneumogastric and pathetic nerve, a facial and a glossopharyngeal; which are, to them, in place of that portion of the pneumogastric nerve of fishes which supplies the muscles of the jaws and fauces, by which organs exclusively the Batrachian and Chelonean reptiles, and, in a great measure, the Ophidian also inspire, the Saurian reptiles alone using their intercostal muscles to any great extent in this operation. The last of course possess further intercostal nerves, as nerves of inspiration, and all are furnished with lumbar nerves, as nerves of expiration, the place of both of which is, in fishes, supplied by those portions of the pneumogastric nerve which go to the muscles respectively of the thoracic ribs and of the gill-flaps. Now, if the last mentioned nerve be, in fishes, a vehicle of sympathy and passion or instinct, it seems fair to conclude that all those which are successively substituted for it—in these in-

(a) Carus, pl. vii, fig. 21.

(b) Malpighi.

stances the facial, the intercostal, and the lumbar—have a common origin, and are so likewise; and that such nerves become more numerous only in proportion as the actions resulting from these stimuli are to become more remarkable. The other proper sympathetic actions of reptiles are not very striking, but some of those resulting from passion are exceedingly so. Of this nature is the change of colour which the chameleon (*Lacerta*, 35) is so well known to undergo from emotion, as well as perhaps the increased brilliancy in the eye of the rattle-snake (*Crotalus*, 34)—in which appears to consist its reputed fascinating power—from desire (a); and it is perhaps to the same head that we must refer the copious flow of tears, which, as said to be shed by the crocodile (*Crocodylus*, 35), on some occasions, has been so long regarded as emblematical of hypocrisy, the increase and vitiation of the cutaneous exhalation of the alliaceous and mephitic toad (*Rana*, 32), when the animal is irritated, and the bath of sweat which, under similar circumstances, is said to envelope the salamander (*Salamandra*, 32), and which seems to have given rise to the notion that the animal can inhabit fire. The pouching of the neck also by some species of serpents, as the cobra-da-capello (*Coluber*, 34), from emotion, is an instance of the influence of passion, in reptiles, on the action of muscles generally voluntary. The proper instinctive actions of reptiles, ordinary and extraordinary, are not, generally speaking, very remarkable; and, upon the whole, the manifestation by this tribe of animals of sympathy and passion or instinct seems to be in no degree disproportionate to the development in them of the system of nerves in question. With respect to birds, they have only the same respiratory nerves as the higher tribes of reptiles, but their distribution is somewhat different—that of the facial nerve in particular, which being now no longer wanted as a nerve of inspiration—a process which is effected, in birds, exclusively by the intercostal muscles—and not yet required to effect a change in the general expression of the countenance from emotion—their horny bill being of course unsusceptible of any such change—is turned backwards over their neck and shoulders, where it is productive of the most striking changes from this cause, as in the bristling of the feathers of the neck on preparing for the fight: it is accordingly very large in the game cock (*Phasianus*, 41), but very small in the duck (*Anas*, 36), which has very little power of displaying emotion in this way. Besides the process of respiration, birds, like reptiles, manifest but few instances of proper sympathetic action; but of those, so much more numerous, which are excited by passion, we may take as examples the blushing of the wattles of the turkey cock (*Meleagris*, 41), the vomiting of the vulture (*Vultur*, 40), the erection of the neck feathers by the game-cock—analogue perhaps to the pouching of the neck by the cobra-da-capello—and many others displayed by birds under strong emotions of various kinds. Their proper instinctive actions also are often very remarkable, and some of these, as their selecting of proper places for depositing their eggs, the running by the aquatic tribes into the water the first time they see it, the construction of their nests and their migrations, have been already alluded to—they appear to be all, however, as well as the actions before spoken of, easily explicable upon the presumption that it is by the respiratory system of nerves that the stimulus, on which they severally depend, is conveyed. Finally, in mammals the complement of this system of nerves is at length filled up by the addition of the accessory, the phrenic, and the external respiratory. The two latter become necessary from the addition, in mammals, of those proper inspiratory muscles, to the motions of which these nerves are subservient; and it is in mammals accordingly that we meet with for the first time, not only a perfect inspiratory process, but that extensive train of sympathies in which the diaphragm is implicated, such as yawning, hiccoughing, and so forth (b). The accessory nerve is, in mammals in general, in place of the facial nerve of some reptiles and birds—an excellent presumptive proof of a common origin—serving, in quadrupeds, to raise the mane, as well as to inflate the neck and arch the shoulders, when they are irritated; while their facial nerve, distributed, as it is, as well on the skin of the cheeks and tunicæ conjunctivæ, as on the muscles of the cheeks, nostrils, eye-lids, and eye-brows, not only involving most of these parts, as other respiratory nerves do other organs, in one common sympathetic action during any impediment to respiration, but gives an intensity and variety to the countenance from emotion, of which no other tribe of animals offers any example. This nerve is relatively small in the sheep (*Ovis*, 45), but becomes progressively larger in the deer (*Cervus*, 45), the ox (*Bos*, 45), the ass and horse (*Equus*, 46), the camel (*Camelus*, 46), the

(a) The reputation of the rattle-snake in this way with respect to small birds, squirrels, &c., seems to have suggested to Milton the idea of endowing the serpent in the flower garden with a similar power.

“—its gentle, dumb expression turned at length the eye of Eve.”

Some quadrupeds also, as the wolf and

hyæna, appear to possess a similar power.

(b) Physiologists have continually echoed one another in ascribing sneezing to a convulsion or spasm of the diaphragm. Such an affection may produce a sigh, a whoop, a yawn, a hiccough, a stitch, a paroxysm of angina pectoris, &c., according to its extent, degree, or duration; but by no possibility can it produce a sneeze.

dog (*Canis*, 59), the lion (*Felis*, 50), and the monkey (*Simia*, 51), corresponding almost precisely with the degree of expression evinced by each; but in no one does it make any approach to its relative size in man, who so infinitely surpasses all animals in this respect. In the greater number of the actions indeed which mammals in general display, from either sympathy or passion, they seem to differ from man only in degree. In the remarkable sympathy between the female genital organs and mammæ, which is peculiar of course to mammals, some quadrupeds are hardly inferior to the human species (*a*); and if man appears to stand almost alone, in his susceptibility of a flow of tears from affliction, and of laughter from mirth, it is perhaps not because there is no tendency, in other mammals, to the same actions from the same primary stimuli, but because they are in general incapable of the peculiar emotions in which these primary stimuli consist (*b*). The proper instinctive actions also of other mammals, are equally similar in general to those of man—an analogy very well corresponding with the general similarity in their respiratory system of nerves—and, upon the whole, it can hardly be denied that there is, in all tribes of animals, a more or less intimate relation between the development of this system of nerves and the manifestation of sympathy and passion or instinct, and that consequently this argument in favour of regarding the former as the vehicles of the latter, regarded as stimuli to irritability, is admissible. It may be repeated, also, that the frequently vicarious nature of the several respiratory nerves, which this summary review discloses, in the various tribes of animals—the pneumogastric nerve of fishes, for example, standing in place of the facial nerve of most reptiles, the facial nerve of most reptiles in place of the intercostal nerves of birds, and that of birds in place of the accessory nerve of mammals, while the intercostal nerves of birds do, not only their own duty, but that of the phrenic and external respiratory nerves of mammals, is strongly corroborative of the opinion that they constitute one collective system; and when we know that at least some of these nerves convey sympathy, while others equally certainly convey passion or instinct, we can hardly refuse to allow to them all a general unity, not only of origin, but of office, or to admit that this office is the one above ascribed to them.

V.—When on the subject of the similarity in structure of the ganglionic and sensiferous systems of nerves, as a presumptive argument in favour of the analogy of their office, it was incidentally remarked that the nerves of the respiratory system and the proper motiferous nerves have a structure equally similar; and if the former fact furnished a fair presumption that, as the sensiferous system was known to be the seat of one kind of susceptibility, the ganglionic was that of another, it is equally fair to presume from the latter that, as the motiferous system is known to convey one kind of stimulus—that of volition—the respiratory system conveys another—that of sympathy and passion or instinct. As the nerves of the two former systems are pexiform and soft, with ganglions also of a very similar structure, so those of the two latter are fibrous and hard, and without perhaps any ganglions at all. It is true the pneumogastric nerve, and perhaps some others of this system, frequently present ganglions in their course; but it is probable that such ganglions belong rather to some of the numerous nerves with which they are in their course associated, than to the nerves in question considered as exclusively respiratory (*c*)—but to this source of ambiguity further allusion will be made in future. In the mean time the general similarity in the structure of the respiratory and motiferous nerves will be very obvious if we compare the facial, the pneumogastric, or the phrenic nerve with the motor oculi, the abductor, or the hypoglossal; and the general dissimilarity in that of the respiratory and sensiferous nerves, if we contrast the facial and trigeminus nerves, as distributed upon

(*a*) We learn from Herodotus that the ancient Scythians were accustomed to increase the flow of milk from their mares by irritating the vagina.

(*b*) The only brutes said on good authority to weep from sorrow, are some species of monkey, the seal, and the camel, the first by Humboldt, the second by Steller, and the last by Pallas: the dog, however, should certainly be added to the list. The alleged "big, round tears," which "course one another down the innocent nose" of the deer, the hare, and other animals, when hotly pursued, are in fact only sebaceous matter, which under these circumstances flows in profusion from a collection of follicles in the hollow of the cheek; and the far-famed "crocodiles' tears," although *bond*

fide tears, do not flow from affliction. But if crying is not confined to man, he is perhaps exclusively "a laughing animal," as he has been sometimes defined, no brute apparently being capable of that sense of the ridiculous, arising from incongruous associations, in which this action originates. The reputed laughing of the hyæna and some other animals, it need hardly be observed, furnishes no exception to this remark.

(*c*) "C'est a tort," says Adelon, speaking of the pneumogastric nerve, "que Reil le disait formé d'une serie lineaire de ganglions: il a evidemment la même structure, les mêmes propriétés, que les autres nerfs spinaux et encephaliques. — (Physiol. de l'Homme, 1824, t. iv, p. 218.)

the face. In as far then as similarity in structure implies analogy of office, this argument in favour of the theory in question appears to be tenable.

VI.—The fact that, while the ganglionic and sensiferous nerves are alike almost inadequate to transmit the galvanic aura, the respiratory and motiferous nerves alike transmit it with facility, has been already more than once alluded to; and as, in this one respect at least, the similarity in structure is attended with an identity of office, we have an additional reason for believing, that the natural function of both, which we know is not identical, is at least analogous.

VII.—But a still more direct argument in favour of the doctrine that it is by means of the respiratory system of nerves that the stimulus of sympathy and passion or instinct is conveyed, is derived from the fact that a direct mechanical stimulus applied to the trunks of the nerves of this system occasions in general a display of irritation, not only in the parts to which these nerves immediately proceed, but also in such others as are known to be sympathetically connected with them (*a*). Thus, any such stimulus applied respectively to the trunks of the glosso-pharyngeal, the pneumogastric and the spinal accessory nerves, as well as to some others of this system, has been found, after a longer or shorter period, to accelerate respiration—a circumstance which can be attributed only to the association, at their origins, of these nerves with the intercostal and phrenic nerves—and as, in these instances, the nerves in question were obviously vehicles of sympathy, of which passion or instinct is merely a modification, it seems fair to infer that such is the office of all the nerves of this system, which are so frequently vicarious of each other, in all cases of the operation of these agents as stimuli to irritability.

VIII. It has hitherto been presumed that the respiratory system of nerves is the vehicle of sympathy and passion or instinct, principally from the facts that all the organs liable to be acted on by these stimuli, as well as those which are the seat of the primary irritation, may be presumed to be furnished with these nerves; that the conveyance of these stimuli is certainly independent of both the sensiferous and motiferous departments of the nervous system; that the more striking are the evidences, in all tribes of animals, of the action of these stimuli, the more is the respiratory system of nerves developed; that the nerves of this system are in structure similar to the motiferous nerves, which are known naturally to convey a stimulus analogous to these; that the two systems may be made to convey certain stimuli in common; and that certain other stimuli applied to the trunks of the several respiratory nerves frequently excite sympathetic actions; but the most conclusive evidence in favour of this theory is the circumstance that the conveyance of sympathy and passion or instinct is at once intercepted by the obstruction of the nerves in question. It has been proved that after the division of the pathetic nerve, by cutting across the tendon of the superior oblique muscle (*b*), the eye-ball is no longer turned downwards and outwards, either in any impediment to respiration, or in rage and other exciting passions, but, on the contrary, remains permanently twisted upwards and inwards; the action of the superior oblique muscle now not only not overcoming, but no longer counteracting that of the inferior oblique—which is moved by the motor oculi—as is naturally the case in dismay and other depressing emotions, when the eye-ball is always turned in this latter direction. It is obvious, therefore, that these movements of the eye-ball, from sympathy or emotions, exciting or depressing, depend on the pathetic nerve, which naturally communicates in the former kinds of emotion more, and in the latter less, than its usual stimulus (*c*); since there still remained, after the experiment above alluded to, other muscles by which the outward and downward motion of the eye-ball might have been effected, had the nerves with which these muscles are supplied been competent to convey the stimuli in question. The section of the nerve in this place was not of course calculated to impede either the contractions of the iris from sympathy, or the flow of tears from either sympathy or passion. But still more remarkable effects follow the division of the facial nerve (*d*). There is now no longer on the side affected any participation by the muscles of the eye-lids or eye-brow, nostrils or face, in the general perturbation arising from impeded respiration (*e*), no tingling of the gums from irritations of the internal ear, nor any

(*a*) This has been sufficiently established by the recent experiments of Mr. Broughton, the general result of which was read to the British Scientific Association assembled at Edinburgh in 1834.

(*b*) This experiment was performed by Sir Charles Bell on a monkey.

(*c*) This influence, at one time active, and at another passive, of the pathetic nerve, renders it easy to understand how the supply of a respiratory nerve to one only of the two oblique muscles of the eye should

be quite compatible with the doctrine which ascribes to the oblique muscles in general all the involuntary motions of the eye-ball.

(*d*) Nature has not unfrequently performed this experiment in the course of suppurations before the ear; and it has been often artificially performed on the ass, the deer, the monkey, and many other animals.

(*e*) It is a common notion that the nostrils are expanded in difficult respiration in order to admit more air to the lungs—an end which would be so much more effectually

other indications of what has been called passive sympathy, or of a primary irritation, having extended from a distant organ to the parts furnished by this nerve; nor, on the other hand, is there any acceleration of respiration from sprinkling cold water on the face, any flow of tears from onions, or sneezing from snuff, or other acrid substances applied to the nostril (a), any coughing from irritating the external auditory canal, or any other indications of active sympathy, or of a primary irritation of the parts furnished by this nerve, having been transmitted to distant organs. Further, the colour of the cheek and the refulgence of the eye remain now quite unchanged under those emotions which usually excite blushing and increased brilliancy of the eyes (b); there is no longer any winking from apprehension of danger—the orbicularis palpebrarum being now unable to overcome the resistance of the levator palpebræ superioris, which is moved by the motor oculi, nor any frowning from anger. The nostril remains pinched, however exciting may be the emotion—the elasticity of its cartilages being now, as is naturally the case under depressing passions at all times, no longer antagonised, and more than antagonised by the requisite muscles—and the general expression of the features from sorrow, mirth, or any other mental perturbation, continue unaltered (c). In birds again, after the division of the facial nerve, the power of expressing emotion by the movements of the neck and shoulders is entirely lost. It may be said indeed, that the facial nerve being not only a respiratory nerve, but the only motiferous nerve of the parts on which it is supplied—as will be explained in future—these facts prove nothing in favour of the presumption that it is by the respiratory system that the stimuli of sympathy and passion or instinct are conveyed: but as the simply motiferous nerves certainly never do convey these stimuli, while the simply respiratory as certainly do so, it must be perceived that it is in the latter capacity that it operates in this way. The effects of a division of the glosso-pharyngeal nerve have not been very well ascertained; but those of an injury or division of the pneumogastric nerve are sufficiently well known. If both are divided, among many minor consequences, such as that of intercepting, in quality perhaps of chief nerve of the whole respiratory system, all sympathy between the nostrils and fauces respectively and the muscles of the abdomen, so that neither sneezing nor vomiting is excited by the two former (d),

attained by opening the mouth. They are distended, under these circumstances, for the same reason as under exciting passions, as when a person flatters himself he has accidentally said a good thing, &c.

(a) "When carbonate of ammonia," says Sir Charles Bell, "was put to the nostrils of an ass, the facial nerve of which had been cut, the side of the nose and face on which the nerve was entire, was curled up with the peculiar expression of sneezing; but on the other side, where the nerve was divided, the face remained quite relaxed; and the same effect has resulted in dogs and other animals, on which the experiment has been repeated." (*Exposition of the Natural System of the Nerves*, &c. 1824). It has been elsewhere remarked that the division of the olfactory or trigeminus nerve has no such effect.

(b) In the case of a terrier, in which the nerve had been divided on one side, Sir Charles Bell expressly remarks, "There is a brilliancy in the eye of the sound side, while that of the injured side is perfectly inanimate"—a fact which has been frequently noticed since; (*Appendix to Exposition*, &c. 1827); and which is of particular value as demonstrating the influence of this nerve, and therefore probably of all the other nerves of this system, on the capillary vessels, the seat of all the molecular actions of the body.

(c) A monkey, on which this operation had been performed by Sir Charles Bell, no longer displayed, on the injured side, the characteristic motions of the eye-lids and

eye-brows from fear or anger; and, when enraged, could grin only on the opposite side, like a paralytic drunkard: and a terrier, which had been subjected to it, lost all power of expression on the affected side; and, when he wished to shew his teeth, the face, which had been balanced before, became twisted to the healthy side, and the eye-lids of the two sides being, in this state of excitement, very differently affected, presented a sinister and ludicrous expression. Mr. Shaw, speaking of a little girl, the right facial nerve of whom was diseased, remarks, "When she laughs heartily, the right cheek and the same side of the mouth are unmoved, while the muscles of the left side are convulsed with laughter; and Sir Charles Bell, in relating a similar case which fell under the notice of Dr. Gregory, observes that all power of expressing emotion with the eye-brow and corner of the mouth of the affected side was entirely lost—the nostril also was permanently collapsed, and the cheek, during emotion, "flapped like a blind before an open window." Such cases have so often attracted attention since the publication of Bell's remarks upon the subject, that these facts are now unquestionable.

(d) Brâchet (*Sur les Fonctions du Syst. Nerv. Gangl.* 1823). From the circumstance that no respiratory efforts are made on any impediment to respiration, and no food taken, however empty may be the stomach, after a section of this nerve, it has been presumed by Brâchet, as before observed, that the pneumogastric nerve is the vehicle of the irritations on which the sensation producing

the natural respiratory process, the regular action of the heart, and the healthy function of the stomach are all simultaneously impeded, and death is sooner or later the result (a). Now all these effects appear to result from the obstruction of sympathy and passion or instinct; the former of which at least, if not the latter also, is certainly necessary to call the respiratory muscles into action, nor is it less essential perhaps to that of the heart and stomach, no two organs having so intimate a sympathy with every other as these, and such a stimulus as this extensive sympathy affords being, in all probability, quite necessary to

a desire to breathe under any impediment to respiration, and that of hunger respectively depend; in other words, that it is not a respiratory, but a sensiferous nerve. These effects, however, may certainly with an equal show of reason be referred to a defective conveyance of the natural stimulus whence all instinctive actions arise, as to a want of certain sensations, which however necessary they may be as precursory to passion or instinct, certainly constitute no part of the chain by which it is conveyed as a stimulus to irritability.

(a) Dividing the pneumogastric nerves has been a favourite experiment of physiologists ever since the time of Galen, and its fatal effects have been ascribed to the impediment, at one time, as by Cruickshank, Bichat, Le Gallois, Magendie, Broughton, Holland, Dupuy, Mayer, and Brachet, of the function of the lungs; at another, as by Willis, of that of the heart; and at a third, as by Valsalva, Haller, Blainville, and Haighton, of that of the stomach. That the first opinion is the true one there can be no reasonable doubt; but, presuming that such is the case, the fatal effect may be brought about, it is said, in any one of six different ways.—1st. By obstructing the conveyance of the natural stimulus of sympathy from the lungs to the respiratory muscles, as has been above presumed. 2ndly. By occasioning a deposition of mucilage in the bronchi, as supposed by Brachet. 3rdly. By occasioning such a collection of air in the air-cells as to produce vesicular, or, by a rupture of some of these cells, interlobular emphysema, as supposed by Mayer sometimes to occur. 4thly. By causing the congestion of the blood in the pulmonary vessels, which, according to Mayer, is the most common result. 5thly. By paralyzing the muscles which keep open the rima glottidis—the circo-arytenoid—so that it becomes permanently closed, as supposed by Holland and Dupuy. And, lastly, by paralyzing, on the contrary, the muscles which close the rima glottidis—the proper arytenoid—so that it remains permanently open, and matters thus pass, as the cardia is likewise palsied, from the alimentary into the respiratory passages, which is another occasional occurrence, according to Mayer. It may be observed, however, that the second, third, and fourth of these modes of operating all resolve themselves into the first, since they are the natural results of the obstruction of respiration; and, accordingly, every attack of asthma is commonly terminated by a deposition of mucilage, and, in the chronic disease, there is usually a greater or

less collection of air—so that, mistaking effects for causes, Bree has traced asthma to bronchitis, and Watson, Baillie, and Laennec, to emphysema—while the total want of the accustomed molecular changes of the blood, resulting from a total cessation of the respiration, might have been expected to occasion its congelation, upon principles already stated. And with respect to the fifth and sixth modes of operating, it appears that palsy of the crico-arytenoid muscles takes place only when the recurrent nerves, *per se*, are divided, and that of the proper arytenoid, with the upper laryngeal nerves *per se*; while the division of the trunks of the pneumogastric nerves, by paralyzing both, keeps the rima glottidis midway between extreme constriction and extreme dilatation, but of course totally immovable—when, however, death results from the entrance of alimentary matters into the air-passages, it must be regarded as entirely accidental. The alleged possibility of obviating all difficulty of breathing, after this operation, by inserting a tube into an aperture made in the trachea, as done by Holland and Dupuy, occurs only, for an obvious reason, after the division of the recurrent nerves; if the pneumogastric nerves are divided near their origin, as done recently by Brachet, the insertion of a tube in the way proposed, has been found to be quite inadequate to prevent asphyxia. The *modus operandi* of the division of the pneumogastric nerves with respect to the heart has been less investigated than with respect to the stomach. It has been abundantly established by Wilson Philip, Clarke, Abel, Hartings, Vavasour, Milne Edwards, Breschet, and others, that, if these nerves be divided in animals which have recently taken food, digestion is materially impeded, and that it is restored by passing the galvanic aura along the eut nerves—and hence has been derived one of the principal arguments in favour of the untenable and almost unintelligible hypothesis that galvanism and the nervous energy are identical—but it is still questioned in what manner the division of the pneumogastric nerve operates in this instance. It has been above assumed that it is by obstructing the conveyance of the natural stimuli of sympathy and passion from other organs to the stomach—the main centre, as it were, of the sympathetic influence of every organ of the body. It cannot be by imparting to the stomach its irritability that these nerves are essential to digestion, since we must, consistently with what has been already at so great length insisted on, conceive that this is derived from the ganglionic system; nor by

maintain their healthy functions. There is indeed good reason to believe that asthma, habitual syncope, and dyspepsia, when merely functional, are all analogous diseases, and all dependent on an inadequate conveyance, by the pneumogastric nerve, of the stimuli of sympathy and passion or instinct respectively to the respiratory muscles, the heart, and the stomach; and it is a strong corroboration of this opinion that the substitution of the strong stimulus to galvanism is equally beneficial in them all—but into a full consideration of this subject it would be improper to enter at present.

furnishing it with its ordinary stimulus, since this is provided by its contents; further, the stomach is not endued with sensibility, and is exempt from the control of the will. What then can the pneumogastric nerves communicate to it but the additional stimuli in question, which may be regarded as hardly less essential to its healthy secretions and motions than that of sympathy to the action of the respiratory muscles, particularly when it is remembered that both are equally disturbed by a section of these nerves and equally restored by galvanism. Maguire believes that the division of these nerves affects digestion only in as far as it affects respiration; but this seems as improbable as that it affects respiration only in as far as it affects digestion. It most probably affects both directly and *per se*; although its fatal effects seem to be owing to its influence chiefly on respiration, as the function most immediately essential to life. According to Holland and Dupuy, who follow the same idea, it ceases to impede digestion as well as respiration, if a tube be afterwards inserted into an aperture of the trachea: but this remark has been replied to already. Lastly, it is the opinion of Leuret and Lassaigne (*Rech. Physiol. et Chim. sur la Di-*

gestion, 1825) that the only effect of cutting the pneumogastric nerves, as far as regards digestion, is that of paralyzing the cardia, so that, by the contractions of the cardiac end of the stomach, the portion of chyme which is first formed is propelled backwards into the gullet, instead of forwards into the pyloric cavity; and, during the subsequent relaxation of this cardiac end, returns into the left cul-de-sac, so that no new portion of the alimentary mass ever becomes exposed to the action of the gastric fluid; but this opinion is a very improbable one: the palsy of the cardia may be a collateral effect of the division of these nerves—like many of those which take place in the lungs from the same cause, but it appears to be—like most of those—resolvable into the generally impeded function of the organ in question. It should not be forgotten, that a very common effect, with respect to the stomach, of dividing the pneumogastric nerves, according to Brodie (*Phil. Trans.* 1814), is inflammation: a fact which further illustrates the strict analogy in the office of these nerves here and in the lungs, the bronchitis, to which the fatal effects have been in the latter case attributed, being an equally common occurrence from the same cause.

LECTURES

ON THE

PHYSICAL EDUCATION AND DISEASES OF INFANTS, FROM BIRTH TO PUBERTY.

By DR. RYAN,

*Delivered at the Medical School, Westminster Dispensary, Gerrard Street, Soho;
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LECTURE XLIII.

Diseases of the Digestive Organs—Vices of Conformation, and Diseases of the Œsophagus and Stomach.

GENTLEMEN—Having described the diseases of the fauces or throat as a portion of the digestive tube in infants, I shall now direct your attention to vices of conformation of the Œsophagus, stomach, intestinal tube, and of the abdominal and pelvic viscera.

Vices of Conformation of the Œsophagus.—

The commonest vices of conformation of the Œsophagus, are partial or total absence of this part of the digestive tube; obliteration of this canal, as described by Meckel, Lallemand*, and Blundell†; termination of

the tube in a cul-de-sac, or a division at some part forming two canals, placed side by side, as noticed by Blaes, who is cited by Meckel. Sonderland, a physician at Barmen, gives a case of absence of the Œsophagus.

When the Œsophagus is impervious, the breast milk or any other aliment is vomited, the infant emaciates, and generally dies in a few hours, for example sixteen or twenty-four after birth. In such cases it has been tried to support life by nutritious clysters, but these were found insufficient.

Alterations of Tissue developed during intra-uterine life.—M. Billard informs us that in two hundred infantine bodies which he examined in 1826, at the Foundling Hospital in Paris, he found the Œsophagus more or less affected in one hundred and ninety. The surface was red or violaceous (of a violet colour), but he and M. Baron consider that this redness is not pathologic, and is the result of the incomplete development of respiration and circulation. The former has, however, narrated cases in which the redness was morbid.

Œsophagitis.—Inflammation of the Œsophagus is rare in adults, and is generally caused by the swallowing of poisons, as calomel and certain other acids. It is however common to new born infants, as the

* Journ. Complem. du Dict. des Sciences Medicales, t. viii.

† Blundell's Lectures on Midwifery, in the Lancet.

œsophagus is generally the seat of more or less congestion, and this is increased by the use of irritating or improper food, which is almost universally administered.

In some cases the inner surface of the œsophagus is covered with a secretion (muguet), is ulcerated or gangrenous. M. Billard has described gangrene of the tube so early as the sixth month.

The causes of œsophagitis are primitive vascularity of the affected part, increased by improper food, as farinaceous aliments, ardent spirits, or exposure to vicissitudes of the weather.

The inflammation may be simple, erythematous, with secretion (muguet), or gangrenous.

The symptoms are vomiting immediately after taking the breast milk or other food; there is pain on deglutition, evinced by cries, the infant rapidly emaciates, and death closes the scene in a few hours. All these symptoms may however be occasionally produced by spasm of the œsophagus, but in such cases the vomiting will be occasional and unaccompanied by pain.

In all cases of new born infants, it is a bad and dangerous practice to give them very hot fluids, on account of the congested state of the œsophagus, which predisposes it to inflammation. All food or drink should not be warmer than breast milk, that is as near the temperature of the body as possible—98 deg. It is this state that causes the frequent vomiting of new born infants.

Treatment.—When the vomiting occurs as soon as the infant sucks or drinks, and is accompanied by pain indicated by distressing cries; cold fluids, milk and water, barley water, or spring water, should be exhibited, leeches and fomentations applied, and these followed by counter-irritation, while the bowels should be regulated by clysters. The strength may be supported by clysters of beef tea, milk, or arrow-root, frequently repeated.

œsophagitis is of much more common occurrence in inflammatory diseases of the throat than is generally supposed, and dissection proves this fact. It is, I repeat, a common cause of vomiting in very young infants, and is excited by the high temperature of the artificial food exhibited by mothers and nurses.

Vices of Conformation, and Diseases of the Stomach.—The stomach has occasionally presented vices of conformation. It has presented three divisions like those of some of the inferior animals, and in other instances did not open into the duodenum. The cardiac orifice has been very much contracted, and the valve of the pylorus absent (Fleischmann,* quoted by Meckel). Even the complete absence of the stomach has been observed in infants deprived of other organs.

The displacements of the stomach are frequent, as attested by M. Baron at the

Foundling Hospital in Paris, and this organ may also form hernia.

The congenital diseases of the stomach and intestines demand great attention, and the practitioner should be able to distinguish between the sound and morbid state of the organ, when called on in medico-legal inquiries, more particularly in supposed infanticide.

M. Billard has given a graphic description of the normal and abnormal states of the digestive tube, which I shall quote freely.

Diseases of the Stomach during intra-uterine life.—It appears, according to the repeated observations of M. Billard, and I can attest the same fact, that the internal surface of the stomach of the foetus in utero, and of the new born infant, is of a white rose colour in a healthy state, that its villosities are more prominent than in the adult, and that about the fourth or fifth month, the internal membrane is easily separated from the muscular and subjacent cellular tissue.

The stomach at birth contains mucosities with small masses of concremented mucous, somewhat similar to the white of egg, and occasionally of a yellow colour. On removing this coat with the nail, or back of a scalpel, the mucous or internal coat of the stomach is sound.

M. Capuron and others consider this mucosity as saburrous. The fluid may be tinged brown or red, according to the pathological state of the stomach.

Congestions.—Congestions of the stomach are very common to new born infants; they vary from the capilliform injection to the general violaceous tint of the parietes of the organ. They are sometimes partial or in spots, which may be of a pale, deep, or dark red colour. They are observed on any part of the interior of the stomach, may be highly inflamed, or succeeded by ulceration. It is always important to consider the cause of the death of the infant. As it usually dies of asphyxia, we commonly find a sanguineous congestion of the stomach, which corresponds with that of the abdominal viscera, in which dark fluid blood is generally discovered. There is also effusion of blood on the inner surface of the stomach of infants who die during, or very soon after birth. We are therefore not to attribute these congenital congestions to inflammation, but to the mechanical cause which produces them. It is however true that gastric inflammation may exist during intra-uterine life. MM. Billard and Denis have frequently observed follicular ulcerations in such cases, and what was remarkable, that the bodies were not emaciated, a fact that shows the disease had only commenced in the last days of pregnancy. When an infant vomits a brownish fluid, there is reason to suspect follicular ulceration or congestion.

Diseases of the Stomach developed after Birth.—The derangements of the stomach

may be divided into, 1. Disorders of function without any appreciable lesion of the parietes; 2. Organic lesions of the stomach with or without derangement of function. I shall describe them according to the morbid appearances, and not as is generally done according to names or terms, which are often erroneous.

Vomitus—Vomitio—Vomiting—Stomachal Indigestion.—Vomiting, which is only a symptom of some disease of the stomach, bowels, gums, brain, chest, or other parts of the body, is ranked as an idiopathic complaint by most of the standard writers on diseases of children. It is produced by a thousand, indeed by innumerable causes in young infants as well as in adults, more especially in the former by repletion, or taking too much breast-milk, improper articles of artificial food, as gruel, pap, panada, rusks, &c. &c., pastries, fruits both fresh and dry, fatty substances, poisonous herbs, sedative medicines, the verdigris of badly tinned copper vessels, the irritation of dentition or teething, the repercussion or sudden disappearance of cutaneous diseases termed exanthemata, as small pox, measles, scarlatina &c., the impression of cold and humidity or moisture, sudden fear, anger, the presence of worms in the bowels—in fact by many other causes. It is therefore evident, that vomiting is a symptom, and not an idiopathic or primary disease. But as preceding professors and writers* have described it as a primary complaint, and as mothers and nurses look upon it in this view, I am induced to comment upon it as a disease. Sometimes the infant vomits the milk unchanged, and at other times it is coagulated or curdled. In some cases there is a simple regurgitation, excited by cough, hiccup, forced laughter, or a great quantity of milk taken at a time. The milk is sometimes coagulated in large masses, and this is said to be effected by acid in the stomach. M. Billard found the stomach filled with coagulated milk in fifteen cases in which death took place from other diseases; in three there was slight injection of the stomach, and in the other twelve the parietes were white and perfectly sound. Is this coagulation, inquires M. Billard, the result of the richness of the milk in cheese, or of acids in the stomach, which coagulate this liquid? Do these acids exist in the stomach previously to the ingestion of the milk? Are they the result of the coagulation of the milk? Does this indigestion depend on the vital and nervous action employed during digestion? These are questions which cannot be answered. M. J. L. Petit supposed that the changes through which the milk passed were effected to render it more easy of digestion.

The milk or other food given to an infant will be vomited unchanged when there is

inflammation of any portion of the digestive canal, as œsophagitis, gastritis, enteritis, or any obstruction of the intestinal tube.

Again, the derangements of the cerebro-spinal and circulatory systems, as irritation in the head or chest, may disorder infantine digestion, and excite vomiting.

It is also reasonable to suppose that gastralgia and entralgia may produce excessive irritability of the stomach and bowels, and give rise to spasmodic vomiting.

Poisoning is another cause of disordered digestion in infants. This is produced by preparing their artificial food in copper vessels. Mothers and nurses should be cautioned against using such vessels, and of the necessity of cleaning them three or four times a day, or before putting them in use. This is always done by a good nurse or an experienced mother, but it is very much neglected by ignorant and inexperienced individuals.

I have stated on a former occasion, that nature has made every infant a voracious glutton. She has acted wisely; there is an imperious necessity for an incessant supply of nourishment to add to the blood, for the development of the body. Infants suck, and take every other food too rapidly. They in general take too much, unless restrained by the reason and common sense of those who have the management of them. If an infant or an adult overload the stomach, uneasiness, irritation and vomiting will be the consequence. Here again conservative nature interposes and maintains her laws, and she will not allow them to be violated with impunity. Repletion; gluttony, or over feeding impedes digestion, and if carried to great excess, excites over distention of the stomach, so as to cause uneasiness; and nature has endowed the stomach as well as all other organs in the animal body, with a privilege to expel or get rid of all sources of annoyance.

When an infant vomits to reject a superfluity of nourishment, it acts in obedience to nature's dictates, and effects its duty with little pain or trouble. It discharges its stomach in an instant, without any pain or inconvenience; and the moment the excess of food or the offending cause of its annoyance is removed, it becomes cheerful and happy, resumes its delightful playfulness and enjoys its wonted healthfulness. Were we to prescribe for this species of vomiting, we should interfere most unnecessarily. We have only to advise the affectionate—indeed in this case, the over affectionate mother, or the too anxious nurse—to give the breast less frequently, and to caution her against dandling the child after it has sucked or taken other food.

When the infant is voracious and sucks too much, it should be restrained, and when its stomach is over-loaded Rosen advises to tickle the throat with a feather dipped in olive oil. If the milk is too rich or too caseous, a substitute ought to be provided, such as that of another woman or of a healthy young

* Boerhaave, Van Swieten, Rosen, Underwood, Capuron, Gardien, &c.

cow. Five parts of milk with one of tepid water and some loaf sugar, is an excellent food for young infants. We should also advise animal and vegetable jellies, calves' foot jelly, good beef or chicken jelly, arrow root, sago, semolina, &c., mixed with milk and sweetened. If we suspect gastritis, we should be cautious in using stimulants, such as fennel water, infusion of rhubarb, weak wine, or diluted ardent spirit. Some practitioners are too apt to order these medicines, without considering whether there is congestion or inflammation of the stomach in existence. These remedies may however be employed under certain conditions.

When the infant vomits the breast milk in a curdled state, there is acid in the stomach, and this should be neutralised with magnesia, lime water, soda water, prepared chalk, &c. A teaspoonful of lime water, or half a wine glassful of soda water, either alone or mixed with milk, and sweetened, may be administered to an infant under a year old. M. Billard prefers sugar and water (*eau sucrée*). In this case the bowels may be too confined or too loose, and will require appropriate remedies.

When the stomach secretes an acid gastric juice, the alkaline remedies already recommended are required to neutralize it; and afterwards mild tonics, as iron, syrup of quinine, &c. &c. are necessary.

We should carefully examine the regimen of the nurse as well as that of the infant, and regulate both. A longer interval should elapse between the repasts of the infant.

When vomiting is symptomatic of other diseases, it is accompanied by illness, fever, restlessness, want of sleep, and the rejected matters are glary, yellowish, green, acrid, acid, rancid, and sometimes fœtid. If vomiting is caused by poisonous substances, the proper antidotes should be administered. Copper and mercury are the poisons most commonly employed, and are neutralized by white of egg, or other albuminous fluids. When occasioned by the sudden disappearance of certain diseases of the skin, the warm bath, fomentation, sedatives, with diaphoretics are necessary. Anodyne frictions over the pit of the stomach often afford relief. Soap or camphorated liniment, with a fourth part of laudanum, is often used with advantage. It is also advisable to dilute the acid or other irritating matters in the stomach, by exhibiting a solution of gum arabic in water, barley water, linseed tea, or decoction of quince seeds.

The following mixture is very efficacious in the vomiting of young infants, provided there are no symptoms of congestion or inflammation:—

Rx. Aquæ anethi, ʒj;
Sacchari purif., ʒij;
Magnesiæ cal., ʒj—ʒij;
Olei anisi, miv—vj;
Syrupi papaveris, ʒj.

Dosis cochleare parvum ter quaterve in die.

The cretaceous mixture with laudanum, or the sedative solution of opium, is frequently beneficial, more especially if there is purging as well as vomiting.

Rx. Misturæ cretæ, ʒiss;
Liquoris opii, miv—vj;
Olei anisi, miv—vj;
Syrupi simplicis, ʒiv.

Dosis ʒj, sæpe in die.

If there be violent and incessant vomiting, the rejected matter brown or tinged with blood, and if there be fever, with symptoms of plethora, we have reason to suspect the existence of congestion or inflammation of the mucous or inner coat of the organ, which would require depletion, warm bath, counter irritation, cold drinks, and the treatment which will be mentioned when treating of these diseases.

Singultus—Hiccough—Hiccup of Infants.—Hiccup is a symptom of gastric disorder, though ranked as an infantile disease by parents and writers. It consists in a sudden contraction of the diaphragm, which expels the air inspired by the lungs, and the force with which it escapes through the narrow glottis is effected with more rapidity than on its entrance. Hence the noise that accompanies the motion of expiration.

Hiccup is common to young infants, and particularly to those whose sensitive stomach is irritated by repletion or too much food, or by improper aliment, as gruel, pap, &c. This affection does not merit the name of a disease, as it usually disappears of itself without any remedy. It is often removed by diverting the infant's attention by speaking loudly to it, or tapping it on the back. Hiccup is often removed in children of a certain age, or in adults, by exciting sudden surprise, and also by the use of lemon juice, vinegar, sherry wine, or brisk table beer. These remedies are, in my opinion, improper for infants at the breast, who generally suffer from acidity in the stomach, and flatulence, which are best relieved by magnesia, cretaceous mixture with oil of anniseed and laudanum, in the proportions as described in the first mixture for vomiting.

Mothers and nurses are unnecessarily alarmed at hiccup, which goes off of itself by lessening the quantity or quality of food.

Lesions of the Stomach, with or without disturbance of function.—The diseases of the stomach at birth may be divided into passive congestions and inflammations, similar to those of the mouth, throat, and intestines, all being parts of the digestive apparatus. Thus we may observe congestions in every part from the mouth to the anus, and the different kinds of inflammation mentioned when describing stomatitis, as the erythematous inflammation, with alteration of secretion (muguet), follicular, and with disorganization of tissue. M. Billard has given the histories of all these cases, which are highly instructive; and his views are in strict accordance with modern pathology. He has done

much more for infantile pathology than any other writer, and I have therefore quoted him freely. He has laid the foundation of scientific infantile pathology, but his therapeutics are very far inferior to those of British practitioners. He has described diseases according to the anatomical lesions, and established a complete system of infantile pathology. This I shall lay under a free contribution.

Congestions of the Stomach.—We often observe the stomachs of infants at birth almost always congested, with more or less derangement of the general and pulmonary circulation, and the abdominal viscera are gorged with black fluid blood. We find on opening the bodies of new born infants, the internal surface of the mucous membrane congested. There is a ramiform or capilliform injection, or patches of various sizes, of a dark red or blueish colour; the coloration being more intense in the most dependent parts of the organ, absence of tumefaction, with friability of the mucous tissue, and most particularly, general congestion of the great venous trunks of the abdomen, of the liver, spleen, venæ cavæ, of the heart and lungs. The blood which stagnates in the vessels of the stomach, is imbibed by the parietes or walls of the organ, penetrates mechanically to the submucous cellular tissue, is infiltrated in the mucous membrane, and freely exudes on the surface of this membrane, so as to colour, with more or less intensity, the mucosities which cover it, and sometimes form a true passive hæmorrhage. We see a great number of cases of this kind in infants at the breast, and some of them resemble purpura hæmorrhagica. The following one is an excellent example, which possesses all the anatomical characters. It is given by M. Billard, from whose account of it I condense the particulars.

A male infant aged eight days, refused to suck, and was deprived of sleep. Its face was swollen, its extremities œdematous and violaceous, its respiration difficult, its cry altered, its pulse scarcely perceptible, the beatings of its heart were small and irregular, and about fifty in a minute, and it vomited a sanguinolent matter. It was enveloped in flannel, its extremities rubbed; and it was ordered the acidulated quinine lotion. It died the day after admission into the hospital.

The cadaveric autopsy presented tumefaction with violaceous redness of the upper lip, the buccal mucous membrane of a violaceous red, the tongue tumefied and ecchymosed at the base, the œsophagus highly injected, the stomach violaceously red in its whole extent; its parietes, which were soft and easily separated from the inner membrane, were infiltrated with black blood. The stomach contained a great quantity of a brownish sanguinolent matter, of a mucous consistence. The liver was intensely red, and gorged with blood; there was fluid blood effused in the cavity of the abdomen. The

left lung was crepitous, the right engorged with blood, and the pleura at this side contained a sanguineous effusion. The heart and large vessels were very much engorged, the parietes of the heart were as if imbibed (imbibeas) with blood, and there was a small quantity of blood effused into the pericardium.

The vessels of the meninges and surface of the brain were highly injected, and so were the choroid plexus and substance of the brain. We see in this case that not only the stomach but all the organs of the body were affected with sanguineous congestion, the venous blood engorged all parts of the circulatory tree. Thus then the coloration of the stomach, the effusion of blood in this organ, and the sanguinolent vomiting observed during life, were in this infant the result of a true passive hæmorrhage, which is very frequently met with at this period of life.

It is however true that congestion of the stomach is often only a simple injection, and not always accompanied by such a remarkable state of plethora as in the preceding case, yet congestion of the digestive passages is a very common disease in the first days of life, as well as at later periods.

There are scarcely any symptoms of stomachal congestion, when the disease is slight, but when violent there is indigestion with sanguinolent vomiting. Other symptoms are more characteristic of the disease; these are plethora of the infant, the circulation and respiration performed with difficulty, which are soon followed by pulmonary congestion with sanguinolent vomiting, which lead us to suspect passive congestion of the stomach, as experience has proved that this disease, both in infants and adults, is caused by disturbance of the circulation.

The indications of *treatment* are to cause the blood to flow in its ordinary course, to free the tissue of organs from a superabundance of this fluid, and above all, to remedy the congestion of the heart and lungs.

The means to accomplish these objects are sanguineous depletions, which will accelerate the subcutaneous capillary circulation, as well as that of the extremities. The treatment will be fully described when the diseases of the circulatory apparatus come under consideration. I may briefly state at present, that all means calculated to equalize the circulation ought to be actively employed.

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MANUAL OF OPERATIVE MEDICINE, BY M. MALGAIGNE.

Freely Translated and Condensed

By GREVILLE JONES, Esq.

Lecturer on Anatomy and Physiology.

SECTION I.—ELEMENTARY OPERATIONS.

WE comprehend under this title the general methods to which recourse is had for the purpose of dividing, removing, or destroy-

ing the living structures, whether by the knife, burning, or ligature; the means of arresting hæmorrhage, and the modes of promoting re-union.

CHAPTER I.—OF INCISIONS, DISSECTIONS, AND PUNCTURES.

SECT. I.—INCISIONS constitute at least half of operative medicine. The opening of abscesses, the removal of tumours, the tying of arteries, amputations, the operations for hernia, lithotomy, &c., are all incisions variously modified. Hence there is no necessity to inculcate the importance of studying them.

Of Instruments.—Some incisions require instruments specially adapted for them, as the cataract-knife, amputating knives, &c., but the knife and scissors are those in ordinary and frequent use.

Of the Bistoury and its various positions.—

The ordinary bistoury has a straight or convex edge*. It is requisite, however, that what is called the straight bistoury should have a slight curve at the commencement of the blade, and, if they shut in handles, these instruments should be made in such a way that they can be fixed when open. The different methods of holding the bistoury are reducible to the five following positions: 1st position, as a pen, with the edge downwards; the thumb on one side of the blade, the first and second fingers on the other; the ring and little fingers serve to take a *point d'appui*. 2. As a pen, with the edge upwards. 3. As a knife in carving, the edge downwards; the thumb and middle finger placed on the point where the handle and the blade join; the index on the back of the blade; the ring and little fingers fixing the handle in the hollow of the palm. This position is varied a little, the fingers being in some cases advanced farther forwards on the blade, while when much force is required the index is turned round with the other fingers on the handle. 4. As a knife; the cutting edge upwards. This is the same as the former, except that the index is placed rather to the outer side of the blade, and the edge is turned in the opposite direction. 5. As the bow of a violin; the thumb and middle finger on the joint of the bistoury; the index on the flat side of the blade; the ring-finger on the outside of the handle; the little finger raised; the edge downwards. If much force is required, the little finger is applied to the handle, and keeps it pressed against the cubital border of the hand.

Of the Scissors (these are held of course in the usual way).—It was formerly supposed that the bistoury acted by sawing, the scissors by pressing. It is now under-

stood that they both partake, in different degrees, of each sort of action. The contusion which has been attributed to the use of scissors is a chimera, and the superior cleanliness of an incision made by them may be seen by cutting a compress, a leaf of paper, or even a hare-lip. When, however, we cut very hard or thick parts, it is well to draw them back a little while in the act of cutting.

Incisions are made either from without inwards, or from within outwards, and their direction may be *from* the operator, *to* the operator from left to right, from right to left, or from above downwards: the two last are easiest for the operator.

Incisions from without inwards.—The following rules are to be observed:—1. *Usually* to direct the incision either along the axis of the limb, or parallel to that axis, or in the direction of the vessels and nerves, of muscular or tendinous fibres, or of the natural folds of the skin; or, in the case of a tumour, along its greatest diameter. 2. *Usually* to incise at once the whole length and breadth of skin we intend to divide, in order to shorten the time and diminish the pain of the operation. 3. *Always* to stretch the skin before commencing the incision. 4. *Always* to retain such command of his hand and bistoury that the operator should not cut deeper or farther than necessary, nor make any *slips* by which himself, his assistant, or the patient may be wounded.

The skin may be put on the stretch, 1, with the hand laid flat, the thumb and index finger separated; 2, with the ulnar border of the left hand resting behind, the little finger on one side, and the thumb on the other; 3, the thumb on one side, the index on the other; 4, with the extremities of the four fingers placed in a line, having the same direction as that we propose to traverse with the bistoury; 5, by drawing the skin on one side, while an assistant draws it on the other; 6, by leaving the assistants to stretch the skin altogether, in order to keep both hands free.

The skin being rendered tense in one of these ways, the surgeon takes a straight bistoury in the third position, plunges it perpendicularly as deep as he wishes, lowers it until the edge forms with the skin an angle of 45°, cuts by sawing and pressing at the same time, and in terminating the incision, raises the instrument perpendicularly, to avoid making those grazing or partial sections of the skin which are called *tails*.

But it is often necessary to perform incisions with the knife at an angle of 20° to 45°, without making a puncture at first, nor raising the handle at last. In this case the knife passes several times along the skin, dividing layer after layer—these tails are inevitable—a slight inconvenience compared with the advantages this mode of operating occasionally offers.

There is a third mode of proceeding. A

* In the original there is a long description of these knives, but I have thought their forms too obvious to render its insertion requisite.—T.

fold of integument is raised, one side of which is given to an assistant to hold, the other side is held between the left thumb and fore-finger of the operator. He then passes the bistoury across the fold, so as to cut down to its base.

Compound incisions, though various, may be reduced to five principal forms, in the shape of a V, of a T, of a cross, of an ellipse, of a crescent.

When two incisions touch at a common point, the second ought to *terminate* upon the first, otherwise there would be some difficulty in stretching the skin, and where one incision is placed above another, it is proper to begin with the lowest, that the flow of blood may not obscure the parts. In making a crucial incision, it is usual to make three strokes of the knife, one transverse, as long as requisite; a second from below upwards, forming the inferior branch of the perpendicular incision; and a third from below downwards, which terminates where the others join: but when the skin is engorged, indurated, and does not roll under the knife, this kind of incision may be effected by two strokes.

Incisions from within outwards.—Independently of those made with the scissors, incisions of this kind are performed with a bistoury, either with or without a director.

Without a Director.—1st method. The straight bistoury, held in the 2nd position, is passed either through an existing opening, or is plunged perpendicularly into a collection of fluid; then, after being lowered until the back of the instrument forms an angle of 45° with the skin, it is carried onwards, stretching and dividing the skin by means of its edge, and is finally raised to the perpendicular to finish the incision. The skin is to be stretched by the ulnar edge of the left hand placed behind the right. 2nd method. A fold of skin being held up, the knife held in the fourth position, is plunged into its base as far as the shaft. The instrument drawn backwards cuts its way out. 3rd method. When we wish to enlarge a former incision, or to join another to it, the bistoury, held flat in the fourth position, should be pushed under the skin as far as may be considered necessary, then by lowering the handle the cutting edge is raised; the point is to be passed through the skin, and the instrument retracted, so as to cut from its point to its shaft the skin which it stretches and supports. 4th method. The incision for a flap. It is scarcely ever used except in amputation. The part which is to be cut into the form of a flap is lifted up with the fingers of the left hand; its base is traversed from side to side by the bistoury held flat in the third position, and by drawing this back, or by sawing it backwards and forwards if necessary, a semicircular flap is cut as long and as thick as directed.

With a Director.—1st method. A grooved director having been introduced under the

skin as far as it is proposed to carry the incision, the point of a bistoury, held in the second position, and inclined to an angle of 45°, is to be placed in the groove. It is carried onwards, cutting in its path, until it is stopped by the termination of the groove; it is then to be raised perpendicularly, and both instruments withdrawn. 2nd method. The director being introduced as usual, the bistoury, held flat in the third position, is glided onwards to the end of the groove; then the edge and point are raised, the latter penetrates the integuments, and the former cuts them throughout.

SECT. II.—DISSECTIONS are, properly speaking, merely incisions of the cellular tissue; but the bistoury or scissors are not always employed—the fingers, the handle of a knife, or the end of a director, are often used to tear or remove the cellular tissue, either for the sake of expedition, or because we fear to injure important organs.

Generally, in dissecting up a flap of skin, we raise its border with the finger and thumb, and holding the bistoury in the first position, pass it freely backwards and forwards from one side of the flap to the other—but where an important organ may be injured, as, e. g. in the operation for hernia, it is requisite to make the dissection *en dedolant**, that is, the incision of the skin being finished, the thin layers of the subjacent tissues are to be raised with a good pair of dissecting forceps, which, with a straight or convex bistoury, held in the fifth position, each of these layers is to be cut horizontally close below the points of the forceps.

SECT. III. PUNCTURES.—Independently of the operations of bleeding, vaccination, &c. the only object of a puncture is to explore a tumour or afford exit to gaseous or fluid collections. We shall only mention here punctures with the bistoury, lancet, and trocar.

The bistoury, held in the 1st, 2nd, or 5th position, if little effort is required, or in the 3rd or 4th, if there is a great thickness to traverse, is plunged briskly in a perpendicular direction to the requisite depth, which is ordinarily marked by the position of the index finger on the blade. It is withdrawn in the same direction. When we do not wish the opening of the skin and of the tumour to correspond, the bistoury is inserted obliquely.

The lancet is held as in bleeding, the three last fingers serving as a *point d'appui*.

The Trocar.—Its handle is fixed in the palm by the three last fingers, the thumb is placed on the junction of the canula with the handle, and the index finger at such a

* This rather untranslateable word means a sort of motion backwards and forwards with the wrist—it is derived from the Latin *dedolo*, to hew or fashion, and answers somewhat, though not exactly, to our vulgar term, niggling.

distance from the point as we wish the instrument to penetrate. It is then driven in and immediately retracted, the canula being left in to withdraw the fluid: to extract the canula, a gentle rotatory motion should be made.

CHAPTER II.—OF CATTERIZATIONS.

By this term we understand the application of heat or caustic substances to any part, the organization or vitality of which we wish to destroy.

SECT. I. OF THE APPLICATION OF CAUSTICS.—They are applied in fluid, soft, solid, or pulverized forms, in the application of all which we should observe the following general rules:—1. To cleanse with care the suppurating surface, and remove all moisture. 2. To preserve the neighbouring parts, particularly such as are lower than the sore, by covering them with plaster or charpie. 3. To sponge away carefully the blood or serum which may flow during the application of the caustic. 4. After the cauterization, to remove carefully, either by dossils of charpie or by repeated ablutions, any portion of caustic that may remain.

1. Of Fluid Caustics.—These are the hydrochloric, sulphuric, and nitric acids; concentrated solutions of potash, soda, nitrate of silver, liquid ammonia, the acid nitrate of mercury, the liquid deuto-chloruret of antimony; the collyrium of Lanfranc, the basis of which is formed by the yellow sulphuret of arsenic, and the green oxyd of copper; the phagedenic water, &c.

They are all applied in the same way. The part being well cleansed, a dossil of charpie or fine linen, fixed on a stick of appropriate length, or held by a pair of forceps, is to be plunged into the liquid and then applied to the depressions and elevations of all the surface to be cauterized. Afterwards the superfluous portion of the liquid is to be removed by dry charpie, or when the caustic has been applied to the bottom of a cavity, we may dissolve and remove it by abundant injections.

As to our estimate of the value of the different fluid caustics—the collyrium of Lanfranc*, the phagedenic water, the solution of nitrate of silver—are feeble escharotics, which are only employed in superficial ulcerations of the gums, mouth, or organs of generation. The concentrated acids act instantaneously, so that their action ceases at a trifling depth, and is easily graduated. The eschar which they produce is dry, yellowish with nitric acid, black with sulphuric acid. The solutions of soda and potash act some time after their application; it is necessary, therefore, to remove with much care any superfluous portion of them; but we cannot regulate with exactness their degree of action. The liquid deuto-chloruret of antimony forms rapidly a dry eschar, the extent

of which we can more easily limit. It is employed frequently and with success in poisoned wounds, and for warts, which have been excised as far as their bases. But for tumours of a suspicious nature, the acid nitrate of mercury is preferable to all. It gives rise to a dry and solid eschar, white at first, afterwards yellow; we can regulate this caustic pretty well, and it extends as deeply as may be necessary; but above all it disposes the subjacent parts to prompt cicatrization.

All the energetic caustics produce sharp pains; and their employment, especially with nervous subjects, over broad surfaces is to be avoided. The nitrate of mercury has been known to bring on violent colicky pains, diarrhoea, and even bloody stools (Dupuytren).

2. Of Soft Caustics.—None scarcely are used, except the ammoniacal pomatum and arsenical paste. The ammoniacal pomatum is formed of equal parts of ammonia and lard. A layer, variable in thickness and extent, according to the effect we are desirous of producing, is spread upon linen. This plaster is applied to the skin in the usual manner. After some minutes this becomes red; then phlyctenæ appear, and in 10 or 15 minutes afterwards, an eschar is formed.

The Arsenical Paste.—We dissolve, either with saliva or water, Rousselot's powder, so as to obtain a soft paste, more tenacious, and easily spread*. The diseased surface is to be cleansed or even pared with a bistoury, and covered with a layer of this paste about a line in thickness, and extending a very little beyond the border of the ulceration; cobweb or charpie, finely scraped, are to be spread over the caustic; compresses and an appropriate bandage finish the dressing.

The eschar is formed in a few days; is detached from the 10th to the 20th, sometimes later, with the paste adhering to it; leaving exposed a red, solid, granular surface, ready for cicatrization. Sometimes, especially when applied to the nose, the eschar and the paste in drying form a scab which does not fall until between the 25th and 40th day, and under which the ulcer is perfectly cured. Often one application suffices; but if after it the tissues present a bad appearance, a second application should be proceeded with immediately.

The cicatrix obtained by this method is thick, white, solid, and presents less deformity than that which succeeds the employment of the bistoury.

This caustic causes generally sharp and

* See for these formulæ Dr. Ryan's Translation of Edwards and Vavasseur.

* The powder of Rousselot contains dragon's blood, 0,22; red sulphurated oxyd of mercury, 0,70; white oxyd of arsenic, 0,08. This preparation is the invention of Cyndrett, is very useful as a rapid blister, especially when the endermic method is about to be tried, and except when too long applied, leaves no scar. T.

burning pains; employed over extensive surfaces it has given rise to the accident of poisoning.

3. *Solid Caustics*.—Those most employed are concrete potash, nitrate of silver, and lozenges.

Application of Potash.—A piece of diachylon plaster perforated with a hole of the form that we wish the eschar to have, *but only of half the size*, is to be placed on the skin. In the centre of this opening, one or more pieces of potash are to be placed, which should be covered by a diachylon plaster larger than the first, and afterwards with a compress and bandage. After six or seven hours the action of the caustic is exhausted. The apparatus is raised, and an eschar twice as large as the opening in the plaster and of a brownish yellow is discovered. It may be picked off with the bistoury, or its separation awaited according to circumstances.

In order to carry the potash to great depths, M. Dupuytren employed troches of pure potash, which he fixed in a port crayon. Much care is necessary to protect the surrounding and especially the inferior parts.

Potash applied to voluminous tumours has the advantage of reducing the tissues it touches into a kind of putrid mass, somewhat similar to hospital gangrene; and this black, soft, humid scab, which is nothing else than a true animal soap, is easily separated by being wiped with a sponge, charpie, or linen. Its application may be repeated daily, inasmuch as this caustic does not exasperate irritation nor provoke degeneration (Mayer).

Application of Nitrate of Silver.—The little cylinders in which this substance is cast, fixed in a port crayon, are very easily applied. If applied to a raw surface this should be previously cleansed; if to the skin, the caustic should be moistened. The eschar is dry, superficial, white and silvery at first, afterwards black, and falls off in a few days. The caustic should be wiped before it is returned into its case.

Of Caustic Lozenges.—By this term are designated some pastes composed generally of the oxydes of lead, mercury, arsenic, &c. of which cones and cylinders are formed that are afterwards dried. These are buried in different points of a tumour, which they cauterize deeply. Perhaps this method is too much despised at present.

Caustic Powders.—Under this form there was formerly in use the alkaline ashes of certain vegetables—the powder of iris, of savine, red oxyde of mercury, and calcined alum. The last may still be found a useful application to large wounds with luxuriant granulations. Experience shews that it represses them better than the nitrate of silver. The wound being cleansed, a layer of a line or more in thickness should be extended over it; two days after the caustic forms a sort of a scab under which the wound is

found to be of a lively red, and the granulations repressed. The application may be repeated as often as necessary; no inconvenience is to be feared.

SECT. II.—ON THE APPLICATION OF FIRE, OR SURGICAL PYROTECHNICS.—There are two methods of applying heat; by metallic cauteries, called also actual cauteries; by other substances, as boiling water, or oil, moxa, gunpowder, ignited phosphorus. We shall only treat of the former in this place; the latter belong to petty surgery.

Cauteries are formed of a wooden or ivory handle separable from the rest of the instrument, of a shaft or of a knob or cauterizing extremity. Both the last are of steel, the shaft, which is about from 7 to 9 inches in length, is sometimes entirely straight, sometimes is bent at a short distance from the knob. A cautery takes its name from the form of its knob. There are many of them, but they may be very well reduced to three. The olive-shaped cautery, the lance shaped, and the nummular, which is a dish, twelve lines in diameter and four in thickness, or instead of that the octagonal, merely a square plate with the edges flattened.

In operating, the knob of the cautery should be heated by an assistant in a portable furnace, with a fierce charcoal fire. It should be raised to a white heat, for the hotter the metal becomes, the better it destroys the parts and the less irritation it produces.

When the instrument is sufficiently heated, the shaft is to be laid hold of by a pair of pincers and fixed in the handle. The instrument is to be used in one of the three following modes, and when done with is to be quenched in cold water.

Objective Cauterization.—The nummular cautery of a white heat, is at first held about six inches from the part we propose to stimulate: afterwards nearer in proportion as it cools. One application is usually sufficient. This cauterization causes the tissues to swell and become red, develops very lively pain, in a word brings on an artificial inflammation, useful in atonic ulcers and some scrofulous tumours.

Transcurrent Cauterization.—It consists in traversing the skin lightly and rapidly with the lance-shaped cautery heated to whiteness, so as to form rays various in their extent and number, but which must never pass beyond the dermis. Some trace the lines first with ink, and occasionally the rays require to have the caustic passed along them twice or more. The eschar of these rays is of a golden colour, and seems at first a very light trace, but it enlarges by degrees and involves the dermis deeply. After the eschar falls off, cicatrization is prompt, and the skin of the part becomes remarkably contracted. The burn is dressed during the early days with dry flannels, rags warmed or steeped in wine to keep up stimulation.

When the inflammatory action is manifest, antiphlogistics must be had recourse to.

Inherent Cauterization.—This consists in applying the cautery heated to whiteness, sometimes to open vessels, oftener to degenerated tissues, or to wounds of a bad character. The form of the cautery and the means of protecting the neighbouring parts must vary according to the case and the region. With respect to the degree of severity that may be employed, the surgeon should remember that the effects of a cautery always extend beyond the point to which it is applied, so that if he make a mark three lines in size, the eschar will be two lines larger.

To protect the neighbouring parts, it has been proposed to cover them with wet linen; but these cool the cautery. Plaster, or a card pierced with an opening in the centre are better. If the parts affected are deeply seated, the wound which leads to them should be enlarged, and when the hæmorrhage has ceased the cautery may be applied through a canulæ of wood or iron. In all contrivances, the important object should be to cauterize with rapidity, that the action of the fire may not have time to spread.

The pain occasioned by cauterization is not so great as is supposed, especially if the cautery be made very hot; and is severe only in the skin. Hence it is advised to incise and dissect up the skin, when that is possible, before applying the fire. The adipose, glandular, and muscular structures are much less sensible, and anomatous, polypous, and sarcomatous tumours still less so (Percy); while the bones scarcely feel at all; indeed their cauterization has been known to produce an agreeable itching. Old men bear cauterization better than young people and children—even very young ones, better than others.

Reviews.

Traité complet de l'Art des Accouchemens ou Tocologie Theorique et Pratique avec un abrégé des Maladies qui compliquent la Grossesse, le Travail et les Couches, et de Celles qui affectent les Enfans nouveau-nés avec Atlas. Par. Alf. Velpeau, Professeur de Clinique Chirurgicale, &c. *A complete Treatise on the Art of Midwifery, or Theoretical and Practical Tocology, with a compendium of those Diseases which complicate Pregnancy, Labour, and the Puerperal condition; and of those which affect new born Infants; with an Atlas.* By Alfred Velpeau, Professor of Clinical Surgery to the Faculty of Medicine at Paris, &c. Third Edition, revised and enlarged. Brussels and London. 1835. Royal 8vo. pp. 547. Sixteen Plates.

We now resume our review of this valuable treatise, and commence with the section on gynecophysiology. The celebrated author

gives a full account of all that has been written on the function of menstruation, and concludes that the menstrual discharge is a secretion from the uterus, exhaling or perspiring from the organ; but that it is not known whether it transudes rather from the venous than the arterial capillaries. This, we may observe, is the conclusion long received in this country, and is opposed to that of those, who term the evacuation sanguineous. M. Velpeau opposes another popular and often professional error maintained since the publication of the works of the father of physic, that if menstruation does not occur at puberty, means ought to be employed to excite the uterus to supply it. Scientific obstetricians are, however, of opinion, that unless the health suffers, and unless the female is properly developed, such medicines are improper, and highly injurious. Our author knew a lady aged twenty-five, who had not menstruated from her eighteenth year, and who still enjoyed good health. Another aged thirty-two, had had not had her periodical health from the age of twenty, and she was in good health.

It is generally supposed that all complaints of young girls are induced by the absence of the menses; and mothers are daily applying for medicines for the purpose of inducing the evacuation. They say, "Oh, sir, she is not as she should be!" It is always to be recollected, that unless the signs of womanhood are evident, the uterine system is in the infantine state, and cannot perform its function until it is properly developed. In chlorotic girls, whose general want of development is apparent, it is absurd and dangerous practice to administer emennagogues, as it is attempting to force the uterus of a child to perform the function of that of a woman. We have seen enteritis caused by drastic medicines, administered in such cases; and on pointing to the undeveloped state of the uterus, which was no larger than that of a girl nine or ten years of age, we inquired of the practitioner how he expected it could perform menstruation? Yet it is a common practice to administer emennagogues under such circumstances. We fully agree with M. Velpeau, with Dr. Dewees, and most scientific gynecologists, that this practice is unjustifiable and dangerous.

It is also necessary to remind the young practitioner, that in cases of suppressed menstruation for two or three months, the general health being good, and all the symptoms of pregnancy absent, there is no real necessity of resorting to the use of emennagogues. Let him be cautious in such cases, and ascertain whether pregnancy be not the cause of the obstruction, which is very often the case. He should also bear in mind that menstruation is generally suppressed during pregnancy and lactation; a fact that some practitioners occasionally forget.

Our author next alludes to the cessation of the menses, and to the opinion, that most women become diseased at this period. He properly denies the predisposition to diseases at the critical period of life, and refers to the conclusions of statistical writers—MM. Chateauneuf, Lachaise, and others—who have proved that as many men as women die between the fortieth and fiftieth year. When proper attention is paid to the regularity of the bowels at the "critical" or "climacteric" age, we observe that women enjoy as good health as at any former period of life.

The next subject is re-production, which is properly introduced after the physiology of menstruation, and is treated with his usual ability by our author. He cites the opinions of all the eminent medical authors, from Hippocrates downwards, and condenses them into a very small space. He refers to his work on ovology, for a more minute description of the ovule after impregnation, though that before us is sufficiently satisfactory. He thinks that new researches are necessary on the *corpus luteum*, but he does not notice the admirable essay of Dr. Montgomery on the signs of pregnancy and delivery, published in the *Cyclopædia of Practical Medicine*. In this paper Dr. M. concludes, that conception never happens without the production of a *corpus luteum*; that this is never found in virgin animals, but is the effect of impregnation; and that every yellow substance in the ovary, is not a *corpus luteum*. The decision on this point is most important in medico-legal inquiries. Thus, in the case of Captain Angus, tried at Liverpool, in 1808, for the supposed murder of Miss Burns, great doubt arose that the condition of the uterus and its appendages

was such as exists after a recent pregnancy. It was not, however, until after the trial that the ovaria were examined, when they were divided in the presence of a number of physicians and surgeons, and a *corpus luteum* distinctly seen in one of them. Mr. Hay took the uterus and its appendages to London, submitted them for inspection to Drs. Denman and Haighton, to Messrs. H. Cline, Astley Cooper, Abernethy, and C. M. Clarke, all of whom certified that there was a *corpus luteum*, and such appearances that could *alone* be explained on the idea of an advanced state of pregnancy, and that it was universally allowed that the discovery of the *corpus luteum* proved the fact beyond a doubt. Angus had been previously acquitted; but had the medical witnesses been well versed in medical jurisprudence, his fate would probably have been very different.

The chapter on true or real pregnancy is comprehensive and instructive. The author considers that any one of the signs of pregnancy is equivocal, and entertains the opinions of Smellie and Gooch, that the changes of the cervix uteri are not so marked, as he once supposed, and as is generally imagined. He thinks that the dilatation of the uterus is a peculiar function, and not effected by the growth of the fœtus. He says that the uterine parietes retain nearly the same thickness during the whole course of utero-gestation, as in the unimpregnated state. Repeated observation enables us to state the contrary; the parietes of the uterus, however they may vary in size in different parts, are much thicker than in the unimpregnated condition. The degree of thickness varies considerably at the ninth month of pregnancy, and is often no thicker than in the virgin, though the substance is sometimes reduced to three lines, and is sometimes so thin as to be almost transparent. Mr. Griffith has informed us that he has a uterus in his possession in the last condition. In speaking of the substance of the uterus, we refer to it during pregnancy, and before labour, for after delivery, it may, from contraction, be double its usual thickness.

Adverting to the signs of pregnancy, our author advises examination by the rectum as well as the vagina. He next recommends *ballotement*, and finally, auscultation. He has not, however, found the last so certain

a mode as some German and British obstetricians have stated. In some cases he discovered the placental souffle very distinctly, in others he failed to detect it. We have, however, found it a most conclusive diagnostic. In a case to which Mr. Hughes, of Holborn, lately called us, we heard it distinctly, and pronounced the young lady pregnant before we felt the infant's head per vaginam. She stoutly denied her condition, but in a few days admitted it. In another recent case which we saw with Mr. Churchill, of Straton Ground, Westminster, we declared the lady pregnant; she also denied it, was afterwards examined by Professor Davis, of the London University, who confirmed our opinion, and at length our patient admitted its correctness. Both patients acted with consummate duplicity, and it would have been almost impossible to detect the latter, had it not been for the aid of auscultation. This diagnostic enabled us to detect another case, for which we refused to prescribe; the lady applied to another practitioner, who was deceived at first, and finally prescribed abortives, for which he was severely censured in one of the superior courts of justice. The *bruit de cœur* is conclusive evidence. When we hear the fetal pulse, and reckon it at 120 or 140, while the maternal is not more than half the number, there can be no doubt of the existence of a foetus.

Our author next introduces the subject of extra-uterine foetation; but as cases of this kind are extremely rare, we shall not notice them further.

False or apparent pregnancy is described with great correctness, and deserves great attention. The blunders made respecting the diagnosis of these cases are frequent, and always reflect discredit on those who make them. Who has not heard of pregnancy mistaken for dropsy and treated as such, or mistaken for abdominal inflammation, and leeches, bleeding, &c. employed? when a chopping boy made his appearance, to the no small discomfiture of the *Æsculapian*. Women had been declared pregnant who laboured under dropsy, and others who were pregnant, were ordered to be tapped at the very hour at which parturition took place. We have been called to attend women supposed to be in labour, who were not preg-

nant, and to perform the Cæsarian section on others, though there was one thing necessary, that was—the women should be pregnant first. We have known medical men attend for three and four days and nights on women who laboured under hydatids in the uterus, and polypous tumours. We were once called into an adjoining county at one o'clock of a Sunday morning in winter, after the severe fatigue of the preceding week, to perform the Cæsarean section; we informed the messenger, who was a medical assistant, that the lady was not pregnant, and our opinion proved to be correct. Though the foregoing cases show the difficulty of diagnosis, yet we have not met but one case out of several, and in this the greatest duplicity was used, in which we were not correct in our opinion. On one occasion a lady swore that she never knew man; yet we assured her that she was pregnant; our opinion was correct, as will appear by the history of the case in our *Manual of Obstetrics*. We may mention here, that she was impregnated in a state of inebriation, to which she was reduced by a cold-hearted seducer. Many practitioners of note assured her that she was not pregnant: but the development of the uterus advanced, and we assisted her at the birth of a son. What puzzles practitioners who are not duly informed, is the apparent pregnancy, the history given by the patient, and in some cases the regular and severe labour pains which simulate those attendant on real parturition. In the supposed case for which we were summoned to perform the Cæsarian operation, the pains returned every five minutes with great violence, but on examination, the cervix uteri was as in the unimpregnated state; the lady was hysterical, well formed, and in the prime of life, and had never been a mother. In another case the woman was forty-eight years of age, said the motion of the infant was so violent as to be intolerable, but the uterus was in the virgin condition. This case was much talked of, and is known to some of the readers of this journal. These and many other cases we might mention, clearly shew the necessity of being able to determine whether a woman be pregnant or in labour; and the question is of great importance, when a woman pleads pregnancy in stay of execution; for by a mistake both

the lives of the mother and foetus may be sacrificed. But when all the usual signs of pregnancy are present, especially the darkness of the areola, the size of the abdomen, the bruit du souffle of the placenta, the bruit du cœur, the altered state of the cervix uteri, there cannot, in our opinion, be the slightest doubt of the existence of pregnancy.

The last article in this section of the work before us, is one that has interested parents and families from time immemorial, though to some readers it may appear of little consequence. M. Velpeau asks, "Is it possible to recognise the sexes during pregnancy? Is it possible to create this or that sex according to the will? Influence of the seasons and prosperity on fecundation?" These questions we shall notice in a future article; and must now observe, that however insignificant or useless they may appear to superficial practitioners, it often happens that individuals are exceedingly interested as to the sex of offspring, when title and property are to be disposed of, and frequently consult their medical advisers on the subject.

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On the Deaths of some Eminent Persons of Modern Times. By Sir Henry Halford, Bart., M.D. &c., &c. 8vo. Lond. 1835. pp. 40.

THIS is one of the most thoroughly contemptible productions we had ever the misfortune to peruse; it contains not a single case of the smallest interest, in a medical point of view, and is merely a prosy narration of the death of some famous persons who died much after the same fashion as their neighbours, and of some infamous persons who, whatever they *did* die of, *ought* to have died of a halter.

Among the latter may be numbered King Henry VIII. of blessed memory.

"That prince, when he ascended the throne, at the age of twenty, is said to have been one of the handsomest and most portly men of his time. In proof of his comely looks in early manhood, I may refer you to Holbein's pictures of him at Windsor, and more especially to that whole-length portrait of him at Belvoir Castle; and, as to his stature, I may argue from the remains of him which I have seen in his coffin, and from his favourite large arm-chair, which is still preserved in the corridor at Windsor Castle. As life advanced, however, he became corpulent, unwieldy, and gross in his habit, was covered with sores, and died of a dropsy at the age of fifty-six.

"Henry's state of health, in the decline of his life, made him a great dabbler in physic; and the King not only offered medical advice on all occasions which presented themselves, but made up the medicines himself, and administered them. We find in that curious magazine of materials for history, the British Museum, a volume containing a large collection of recipes for plasters, spasma draps (dipped plasters), ointments, waters, lotions, and decoctions, devised and made by the King himself and his physicians, applicable, perhaps, amongst other diseases, to that which had been imported, some twenty-five years before, from Naples; and, in Sir Henry Ellis's most interesting collection of Original Letters, we read one from Sir Bryan Tuke to Cardinal Wolsey, giving an account of an interview with the King, in which his Majesty prescribed for Sir Bryan, and sent also some excellent instructions to Cardinal Wolsey, how he might avoid the infection of the sweating sickness, and how he should treat the disease should it attack him."

His Majesty's skill in *surgery* should not have been omitted—his wives' heads, with their "poor dumb mouths," attested the boldness of his surgical genius, and also proclaimed him a monster worthy of the execration of all posterity.

Cardinal Wolsey, the minister and crony of the bluff monarch, "died of a broken heart, in fact, though the symptoms which afflicted him in the last days of his life, were those of a dysentery."

We agree with our author, that Wolsey was not such a bad fellow as some would have made him appear; he died almost a saint, and quite a prophet: he had no sooner uttered his last words, than "Incontinent the clock struck eight,
'The very hour himself foretold should be his last.'
Shakspeare.

The hour at which he knew, and had prophesied he should die, he gave up the ghost, and thus departed this life."

If the clock was as incontinent as his eminence had been, it was one of the naughtiest clocks that ever ticked. The most interesting pathological circumstance connected with the demise of the cardinal, appears to be, that he departed this present life by giving up the ghost—this is a very striking fact, although it does not entirely settle the question, "an corpus anima relinquat an animam corpus;" for authorities on this disputed point, see L. Christ. Frid. Garmann *De Miraculis Mortuorum*. Dresd. and Lips. 1709.

That very interesting female Queen Mary, died of dropey, which she at first mistook for pregnancy; so did Johanna Southcote. This princess, it appears, "inherited from Queen Catherine her mother, a weak constitution, and was always of feeble and unpromising health. When she arrived at mature age, the peculiarities of her sex were irregular and deficient; for which were prescribed bleeding and exercise on horseback." Good, now, sweet Sir Harry, tell us what are the peculiarities of the sex; for we hold that they be many and hard to understand—at least we never could make them out to our entire satisfaction.

Among other deaths, that of the truly eminent Jonathan Swift is commented on by Sir Henry. All we have to say is, that it is fortunate for the worthy baronet that the Dean is his subject, rather than he the Dean's; in the latter case, "The Deaths of some Eminent Persons" might possibly have been furnished with a commentary like that on "Dr. Gibbs' Version of the Psalms of David." But we must not occupy more space with the very sorry publication before us—its contents are devoid of utility or interest, and the badness of its style is sufficiently evinced by the few passages we have extracted.

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DISEASES OF THE GENITO-URINARY ORGANS.

(Continued from p. 756.)

Diseases consequent to Blennorrhagia or Gonorrhœa.

Phymosis.—The term phymosis is applied to that disease, when the prepuce cannot be drawn back so as to uncover the glans penis. The disease may be congenital, or accidental, and the latter demands most attention on the present occasion.

The causes of accidental phymosis, are gonorrhœa, excoriation from this disease, from coition or want of cleanliness, and lastly from chancres or venereal sores on the glans penis, or on the under surface of the prepuce.

When the urethra is inflamed in gonorrhœa, the inflammation may extend to the glans, and cause it to swell to such a degree, as to distend the prepuce and induce phymosis. The dependent position of the penis favours the ingress of blood into the inflamed glans and prepuce, and necessarily retards its egress. It is for this reason that phymosis is so common to the working classes, who while labouring under gonorrhœa are obliged

to follow their usual employment. It is, however, a fact, that in many cases inflammation extending to the prepuce itself, and not of the glans, is the cause of phymosis. I have seen numerous cases of this kind, and am of opinion that they are more common than the former.

In some cases this inflammation of the prepuce is very slight, and the integuments scarcely discoloured; in other cases, we find them red, swollen, and the disease occupying the whole integuments of the penis. In these cases the skin is of a deep red or purple colour. We observe other examples, in which the prepuce is elongated over the glans to the extent of two or three inches, and terminated by a minor orifice. In some cases there is a hard narrow band passing round the fore-skin near the external opening.

Inflammatory phymosis may terminate in suppuration or gangrene, and in many cases the glans or whole of the penis to the pubes is destroyed by mortification. It has been long remarked that abscess very rarely occurs in the prepuce; though we sometimes observe it behind the suspensory ligament at the pubes. In consequence of the unyielding nature of this ligament, the entire penis becomes exceedingly tense, and indurated.

The integuments are of a dark red colour, which indicates the presence of matter underneath, though fluctuation can be rarely felt. The matter usually makes its way through the dorsum of the penis, in the thinnest part of the suspensory ligament. In some cases the abscess extends to the mons veneris or even above the pubes. In other examples this part may slough and form a foul ulcer.

When the tumefaction of the prepuce compresses the orifice of the urethra, so as to close this passage, the result will be complete retention of urine. In this case the urethra ulcerates unless speedily relieved, the urine is extravasated into the surrounding cellular tissue, producing the most extensive gangrene of the penis, scrotum, and adjacent parts.

In some cases of inflammatory phymosis, adhesion takes place between the prepuce and glans, and this union may remain permanent. Here then will be phymosis which may induce inflammation, gangrene, and death, at any period of life, but especially in old age.

In the latter period of life, the prepuce gradually contracts and forms phymosis, which may obstruct the orifice of the urethra, prevent the discharge of the urine, and this fluid will be forced between the glans and prepuce, give rise to inflammation, ulceration, or gangrene.

Infants are generally born with phymosis, but there is no remedy required, as supposed by the Jews, because the closest contraction will yield to occasionally drawing back the prepuce after bathing the part with warm milk and water. The glans will act as a wedge when the fore-skin is frequently drawn back

and the contracted prepuce will be dilated. There should however be no interference when the infant passes water freely, and more especially as touching the prepuce leads it to contract a very bad habit, and a source of great irritation. Circumcision or slitting the prepuce is only required in these cases in which the infant cannot evacuate the bladder; and under such circumstances the sooner the operation is performed the better.

Partial contraction of the prepuce spontaneously disappears in most cases at the age of puberty, or at the approach of manhood, when frequent erections of the penis distend the glans, and cause it to act like a wedge on the affected part. But when the contraction of the prepuce continues to be a serious obstacle to the performance of the generative function, an operation is required. This is performed in one of two ways—by slitting open the fore-skin upon a director, by a longitudinal incision, or by partially incising the fore-skin, then drawing it back as far as possible, and dividing its inner fold. This last method, which was proposed by the editor of this Journal, as stated in Mr. Cooper's Surgical Dictionary, 1831, causes less deformity than the former operation. M. Dupuytren proposed to divide the prepuce at the side of the frœnum. There is seldom any hæmorrhage by either operation; and I introduce both in this place, before describing the treatment of inflammatory phymosis.

This disease is to be treated on ordinary principles, though there are some modifications, as will appear by the following remarks.

Treatment.—In mild cases, inflammatory phymosis will yield to injections of tepid water beneath the fore-skin, taking care to keep the penis raised; to cold applications and evacuation of the bowels, with rest and low diet. It is most essential that the patient should remain on a sofa or in bed; keep the penis raised towards the abdomen, and thus favour the return of blood from it into the circulation. It is for this reason that judicious surgeons advise a patient with a broken leg, thigh, or arm, or inflammation of any of these dependent parts, to keep them raised so as to expedite the return of the blood through the veins towards the heart. If the patient can remain in the recumbent or laying position, he should support the penis on the pubes and towards the abdomen, with a proper bandage. He should also apply a cold lotion constantly, or as frequently as possible. The disease will not yield when the penis is left in its ordinary dependent position, as this favours the progress of the inflammation. But when the inflammation is intense and extensive, and threatens gangrene of the whole penis, the most active antiphlogistic measures are necessary. General blood-letting will be required; leeches to the affected parts, or punctures, may be made in them. The punctures

afford great relief, as they allow the escape of the serous part of the blood, which is often the cause of the tumefaction, and likewise of the blood itself.

Men of intemperate habits, who continue to work and drink as usual, and allow the penis to remain pendulous, suffer very severely from this disease. These are often broken down subjects, and will not bear depletion.

In these cases, when there is danger of gangrene, it will be necessary to slit the prepuce, and freely expose the glans. The loss of blood by this operation is highly advantageous, unless it be too profuse, which is seldom the case. Some object to incision of the prepuce, but such practice is proved to be valuable in diffuse inflammation of other parts, and repeated observation has convinced me of its value in the disease under consideration. I am certain it has prevented gangrene in many cases.

In bad habits or broken constitutions, it will be necessary to allow wine, porter, &c. as in other cases of threatened gangrene. Warm fomentations and poultices are also beneficial.

When gangrene has occurred, and inflammation has ceased, we should treat it on ordinary principles, and assist nature in throwing off the sloughs or dead parts.

The dilute nitric acid lotion, and fermented poultices, with solutions of the chlorides, are excellent remedies. The powers of the constitution should be preserved by quinine, wine, porter, and animal food, according to circumstances. But if inflammation exists beyond the dead parts, antiphlogistic remedies will be indispensable.

It sometimes happens that after the sloughs have separated, there will be profuse hæmorrhage. The best styptics are warm oil of turpentine, and a saturated solution of albumen, while compression is also applied.

When there is retention of urine caused by a contracted phymosis, incision is required. If extravasation of urine be allowed to take place, free incisions will be necessary, but a timely division of the prepuce will prevent this troublesome and dangerous disease.

In chronic phymosis, in which there is partial adhesions between the prepuce and glans, we should carefully separate them with a scalpel, and prevent their recurrence by interposing oiled lint between the parts. When there is complete adhesion between the prepuce and glans, so that a probe or director cannot be introduced between the coherent parts, an operation ought not to be performed, as it is exceedingly painful to the patient, and almost invariably unsuccessful. I have known it repeatedly to fail.

In those cases in which the prepuce is considerably elongated beyond the extremity of the penis, circumcision will be performed with benefit.

We seldom meet with such cases, if the

phymosis be treated judiciously at its commencement*.

Paraphymosis.—When the prepuce is retracted behind the glans penis, and cannot be drawn over this part, the disease is called paraphymosis. In this case the prepuce acts as a ligature behind the corona glandis, and hence the disease has been termed circumligatura.

The effect of this constriction is the prevention of the return of blood from the glans as well as from the portion of the prepuce anterior to the stricture; and the consequence will be, cedematous swelling and inflammation, followed very rapidly by gangrene.

Paraphymosis is often caused in a healthy person by drawing a tight prepuce behind the glans, or by sexual intercourse; but it is most commonly produced in incipient phymosis, by the patient being induced to draw back the foreskin, with a view of examining the glans. He finds that in consequence of the swelling of the latter, he is unable to replace the fore-skin, and he thus produces the disease under notice.

Paraphymosis is often induced by children and school-boys, who, in sport, draw back the prepuce, and cannot return it.

The indication of *treatment* is to restore the prepuce to its natural situation, and this is effected in one of three ways.

The first method is generally followed, though most injudicious. It is attempting to push the glans with the thumbs through the stricture, and at the same time endeavouring to draw the enlarged and contracted prepuce over it with the fingers. I have seen patients faint during the operation, and the surgeon fail at the same time. The objections to this operation are—first, the glans is enlarged and in its natural situation, then why push it back? secondly, its congested state offers an insurmountable impediment to forcing it through the narrow space formed by the stricture. The second plan is applying cold lotions and puncturing the cedematous prepuce; and the third is the best, which is the following:—

The scientific surgeon, recollecting that the glans receives its blood from the corpus spongiosum urethræ, compresses the enlarged glans between his fingers, so as to force the blood into its natural channel; he thus diminishes the size of the glans, and with the other hand very readily succeeds in drawing the prepuce over it. The patient scarcely suffers any pain, and the operation is generally successful. When the glans is diminished by the pressure, it ought to be

drawn a little forwards, when the prepuce will slip over it without any difficulty. When the prepuce is cedematous, it ought to be punctured with a lancet, to evacuate the serum, and thus diminish its size; and should there be inflammation, or great congestion of the glans, cold should be applied for a few minutes, before attempting the operation of reduction.

In chronic cases, or when there is inflammation present, we often fail by either of the methods now mentioned. In the latter case, leeches or scarifications may be necessary.

In all cases when dangerous symptoms are urgent, division of the stricture must be effected when other means have failed, or are impracticable. The skin of the penis is to be drawn towards the pubes, and an incision made through the strictured part. A slight incision is first made, a director is then passed under the stricture, and the part divided. When this division is effected, the prepuce will, in most cases, pass readily over the glans; but should there be any difficulty in accomplishing its passage, it may be left in its present position, as the removal of the stricture prevents all dangerous results. In fact, from the moment the stricture is divided, the symptoms begin to subside, and as soon as the inflammation and swelling disappear, the prepuce will glide spontaneously over the glans. I have known this occur in the worst cases, in which manual pressure was intolerable.

When paraphymosis is neglected, and the inflammation has subsided spontaneously, adhesions take place, there is a tumour behind the glans, sometimes of a size to prevent erection and copulation. I have met with three such cases, which were cured by operations.

Excoriations.—When the inner surface of the prepuce and glans are irritated by gonorrhœal discharge, they sometimes become excoriated. There may be several abrasions, accompanied by itching, redness, and a yellow secretion. The sores are superficial and irregular, and are sometimes of an oval or circular shape. They are easily distinguishable from venereal chancres, though some eminent authors deny the dissimilarity. The best mode of distinguishing between excoriations and venereal ulcers, is to refer to the time at which either appeared after sexual commerce. Chancres do not appear immediately after connexion, and they are generally circumscribed and defined, while excoriations are diffused.

There is, however, great difficulty in many cases in deciding on the nature of many sores which appear on the genitals, in consequence of the applications which patients make previously to applying for advice. The history of each case will, in general, enable us to form a correct opinion.

Treatment.—The indications of treatment are to regulate the bowels and keep the parts

* We see a great number of cases at the Free Hospital, which generally yield to the treatment above recommended, and have not observed one in which circumcision was necessary.—ED.

perfectly clean. [Solutions of acetate of lead, sulphates of lime and copper, black or yellow wash, frequently applied on lint, will speedily effect a cure in a great majority of cases.

There are many other morbid conditions excited by blenorragia, or gonorrhœa, which require consideration. The nervous connexion between all parts composing the genito-urinary organs, and the whole nerves of the body, accounts for the disorders excited by local disease of the urethra, testicle, prostate gland, bladder, ureters, and kidneys. The universal sympathy between all parts of the body will account for the excitement of diseases in remote parts.

There are, therefore, other diseases induced by urethritis, which must be noticed; these are chordee, bleeding from the urethra, irritable bladder, and mucous disease of the bladder.

Chordee.—This term is applied to a painful erection of the penis, during which the organ is drawn downwards, or laterally; and the patient feels as if cord were surrounding it. The cause of this disease is inflammation of the corpus spongiosum, and the pain is produced by dilatation of the vessels, induced by the influx of the blood preparatory to an erection. The disease is most troublesome at night, when the patient becomes warm in bed.

The *treatment* consists in the application of cold water or cold lotions, leeches, and fomentations to the affected part; at the same time administering hyoscyamus, camphor, opium, and conium internally; and if there be much ardor urinæ, or scalding, the medicines already prescribed for that complaint. When the disease becomes chronic, there is generally more or less induration of the penis, and this is best removed by the preparations of iodine, and the ung. hydr. camphr.; but some cases are incurable*.

Bleeding from the Urethra.—This sometimes occurs from painful erections, or after the introduction of instruments. When the hæmorrhage is considerable, a compress ought to be placed on the root of the penis, and secured by a roller brought round the loins, and passed between the thighs, so as to press the organ against the pubes. Others recommend cold lotions.

The urethra is congested or inflamed, and requires the same treatment as in acute urethritis. The patient should be confined to bed or to a sofa, and avoid all causes capable of irritating the generative organs. All vinous and spirituous liquors, walking, riding on horseback, or in a carriage, and dancing,

are injurious. Sexual commerce ought to be avoided.

Irritable Bladder.—Towards the last stage of gonorrhœa, there is often an urgent desire to empty the bladder, which may occur every ten minutes; the urine is voided in small quantities, and sometimes mixed with blood; this may give rise to the suspicion of stone in the bladder. It is of great importance to form an accurate diagnosis, between the one disease and the other, and this can be readily done. In irritable bladder there is generally no pain after the expulsion of the urine; whereas in stone, the pain will be usually felt. The pain is most violent in irritable bladder, when the organ is full, or contains urine, and sometimes the inflammation is followed by suppuration, and then there will be a discharge of purulent matter. This disease is one of the most painful incident to humanity, and is often induced in old people by the extension of urethritis to the mucous coat of the bladder, by the improper use of stimulating injections, or by the retention of urine, from motives of delicacy. The disease, if improperly treated, may speedily destroy life; and on dissection the mucous coat of the bladder will be found inflamed or ulcerated.

The indications of *treatment* are to alleviate the pain, and to prevent its return; these objects will be best effected by large doses of opium, by opiate suppositories, and by keeping a gum elastic catheter constantly in the bladder. A flexible instrument is generally preferred, and it should be secured in its place by a bandage carried round the thighs and loins; the instrument thus applied will afford immediate ease, by emptying the bladder, and by allowing the urine to escape as fast as it enters the organ; the bladder will thus be kept constantly empty; and there is no objection to this plan, even if there be ulceration, for by keeping the bladder quiet, cicatrization will be facilitated. The bowels should be opened by castor oil, the pubes and perinæum shaved, and a blister applied to either part. The free use of carbonate of soda, or liquor potassæ, will be very beneficial, by decomposing the urine, and freeing it from its irritating effects on the inflamed tissue. In some cases the disease will be followed in old persons by a copious mucous discharge, which was formerly denominated *catarrhus vesicæ*.

The quantity of mucus is often considerable, and the fluid is thick, tenacious, and of a pale yellow colour. It is caused by disease in the internal surface of the kidneys, ureters, and bladder.

The best remedies for this complaint are copaiba, uva ursi, pariera brava, with soda, liquor potassæ, and liquor calcis.

* We have been consulted in some cases, in which there was permanent lateral, and in others inferior curvature of penis, which very much impeded coition, and some of these patients were cured with iodine. Others were not relieved.—Ed.

The London Medical

AND

Surgical Journal.

Saturday, July 18th, 1835.

**NON-ADMISSION OF PATIENTS INTO
THE METROPOLITAN HOSPITALS.**

WE beg the attention of our readers to a letter signed T. W. H. in the Times of last Saturday.

It contains two striking illustrations of the manner in which the poor of this metropolis are debarred from the advantages which public hospitals ought to extend to them, and left to suffer unaided, or to die neglected.

A patient, in a miserable state of disease, and whose case was acknowledged to be one requiring *immediate* attention, applied at Guy's Hospital on a Monday, and was told that Friday was the day for admitting *medical* cases *; the patient returned on Friday, and was again refused admittance because it was four minutes past the appointed hour.

The week before, a still more revolting case occurred at the same institution. A poor girl who had come all the way from Croydon for advice, and who applied for it on the right day—Friday, was put off till that day week, because she was twelve minutes after the regular hour: *within four days from that time she was dead.*

The coarsest humanity would sicken over such recitals! So, then, although disease and destitution occasion misery every day of the week, they are to meet with compassion only on one day; impending death is an evil to be averted at ten o'clock, but a matter of entire indifference at eleven. Suppose a man to be seized with acute inflammation of a vital organ, which if not arrested,

may prove fatal in forty-eight hours. His friends, if he have any, convey him to the hospital, and, if he have none, he crawls there as he best may, and craves admission. "My good friend," quoth the porter, "this is not the right day—take it coolly—you will be admitted in less than a week." Another is struck with apoplexy at eleven o'clock, and is straightway brought to the hospital. "He should have been struck an hour sooner, quoth the porter, "bring him again this day se'nnight." The unhappy men keep not the appointment; they have already been received into the bosom of their mother earth, by a mode of admission not regulated by times or seasons. If perchance a rude stone mark the place where such a *victim* of public charity lies buried, that stone is less the monument of a forgotten pauper, than of the barbarity of a nation calling itself civilised and humane!

A man with two days' life in him is in fine condition to wait a week for medical aid; a man in a state of coma is like to be an exact observer of regulations and of hours!

How is it that in a country which we believe, sincerely, and without partiality, to contain a greater aggregate of humane and generous feeling than any other on the face of the earth, the ends of charity can thus be frustrated, and the very decencies of humanity outraged? We cannot tell; but of this we are certain, that if a foreigner were to see nothing of England, but what passes, six days out of the seven, at the doors of our metropolitan hospitals, he would proclaim us, with seeming justice, as a nation either of savages or of idiots.

We are very glad to see the letter alluded to at the commencement of this article. We wish sincerely that well disposed persons would oftener express, in the public prints, the feelings which cannot but arise within them when circumstances bring them in contact with the regulations of our hospitals: for our

* This may aid us in drawing the line of demarcation between physic and surgery—*medical* cases are those which are admissible at Guy's Hospital on Friday.

own part, we shall never be remiss in seconding their representations—the subject is one which admits of no discrepancy of opinion among those endowed with common sense and common feeling; there are many points on which we may think wrong while advocating what we believe to be right; but on points of ordinary humanity, there is no fear of error—on these all men, *except the regulators of London hospitals*, think alike.

At this moment we know of only two institutions, in or near London, which have the smallest claim to be considered as hospitals in the true sense of the term; the one is the Free Hospital in Greville Street, Hatton Garden, and the other is the Seamen's Hospital, off Greenwich; at either of these a patient presenting himself at any hour of the day or night is admissible, if there be room for him. The former owes its existence to the spirited exertions of a few medical gentlemen, and principally of Mr. Marsden; the latter was instituted by the enlightened philanthropy of some gentlemen unconnected with medicine, and is, perhaps, less of a doctor's job, or a job of any kind, than any other of our medical charities. The surgeon resides on board the vessel. The medical officers are paid for their trouble, according to the means of the institution, and, as far as we are able to collect, discharge their duty in a manner highly creditable to themselves and beneficial to the objects of the charity.

With regard to the large metropolitan hospitals, we can only say what we have already said again and again—they *must* come under the superintendence of the legislature, and they *will*!

—o—

DUPUYTREN'S CLINIC.

Hernia.

CASE I.—*Inguinal Hernia, strangulated at the neck of the Sac—Operation—Enteritis—Death.*—A man of spare habit, about 58 years of age, came to the Hôtel Dieu, labouring under all the symptoms of strangulated hernia, such as hiccough, nausea, flatulence, bilious

and stercoraceous vomiting, and suppression of the alvine evacuations. This state of things had lasted for about twelve hours, and had been produced by an effort of the patient to get into bed. On this point M. Dupuytren made an important remark. Persons afflicted with hernia, he observed, are accustomed to wear a truss only during the day, and imagine they may leave it off at night without danger; whereas, according to my experience, in the majority of cases it is during the night that strangulation takes place. The effort of getting into bed, any effort or movement when there, efforts of a certain description especially, are so many causes which unceasingly threaten strangulation. We cannot, therefore, too earnestly advise persons afflicted with this malady to keep the truss applied day and night.

In the present case there was an inguinal hernia of large size, a considerable fold of intestine appearing to be engaged. But neither the external ring, nor the inguinal canal itself, formed the stricture; for the intestine could easily be made to pass up to the *internal* ring. The stricture, therefore, was at the neck of the sac. The hernia had not been strangulated above twelve hours; there was no appearance of immediate danger, and no remedial measures, such as general or local bleeding, baths, emollient or astringent applications, &c., had been employed. Nevertheless, the well-known difficulty of reducing hernias of this description, determined the surgeon to operate immediately.

An oblique incision was made over the tumour, in the direction of its long diameter. The different layers were successively divided, as well as two arteries, which were tied; the sac was raised up, and opened about its middle, a little serous fluid escaping. The intestine appeared of a reddish brown colour, but in a state sufficiently healthy to admit of its return. As had been expected, the quantity of intestine was large—eight inches being engaged. The stricture was divided, not with a *concave* probe-pointed bistoury, as is so generally recommended, but with a *straight* probe-pointed bistoury, for want of a bistoury cutting on its *convex* edge. A *concave* bistoury, according to M. Dupuytren, is liable to very serious objections. Besides that it cuts with greater difficulty, and rather by pressing than by sawing, we cannot fail to perceive that the most concave part of the instrument being that which corresponds to the neck of the sac, the curve of the instrument is very likely to wound some part of the intestines contained in the cavity of the abdomen, especially where a free division is necessary. With a *straight* bistoury, on the other hand, and better still with a *convex* one, the division is much more easy. It is made rather by drawing than by pressing; and the instrument may be carried much farther on without risk of doing mischief.

The *convexity* of the instrument corresponding to the stricture, the slightest motion is sufficient. As to the direction in which the division ought to be made, M. Dupuytren does not hesitate, in all cases of inguinal hernia, to divide directly *upwards*, in a direction parallel to the *linea alba*. By this means, he observes, we always avoid the epigastric artery, and we get rid of the numberless difficulties which render the operator uncertain as to whether he should divide *inwards* or *outwards*.

The mass of intestine being considerable, and filled with gas, M. Dupuytren (according to the method he is accustomed to adopt) pressed it gently between the palms of his hands. By this means the air was forced from the inferior portion of the tumour into that part of the intestine remaining within the abdomen. The size of the hernia was thus diminished, and its reduction became more easy. When this latter step had been accomplished, a bandage was applied; but union by the first intention was not attempted. M. Dupuytren recommended that the patient should be bled in an hour; again in the evening, if necessary; and even a third time during the night, if symptoms of peritonitis should arise. The first bleeding was performed; the others were not. Whether this omission favoured the development of inflammation, or whether a fatal result would have occurred notwithstanding, violent symptoms of enteritis supervened, and the patient died two days after the operation, in spite of local depletion, baths, and fomentations. On opening the body, effusion of sero-sanguineous matter was found in both the iliac fossæ. The external surface of the intestines presented at intervals large spots of a dark brown colour. It was a part of the small intestines which had formed the hernia. Internally, the mucous membrane was very highly inflamed.

CASE II.—Inguinal Hernia strangulated at the neck of the Sac—Operation—Cure.—A young man about twenty years of age, of a strong constitution, had been afflicted for a long time with inguinal hernia of the right side: the patient happening to make a false step, this hernia became strangulated. He was immediately attacked with colic, nausea, and hiccough; then with vomiting and suppression of the stools. Bleeding and a bath were employed without relief, and the patient was brought into the operating theatre fifteen hours after the strangulation. A tumour was seen in the right groin; and the same symptoms as in the preceding case, indicated strangulation at the neck of the sac. The operation was immediately performed with great facility. Two arteries were divided, the four ends of which were tied directly. The intestine, which was of a light brown colour, was reduced without difficulty. Immediate union was not attempted.

No accident followed the operation. The abdominal tension and pain disappeared, together with the nausea and vomiting. The alvine evacuations were re-established, the wound proceeded rapidly towards a cure, and, ten days after the operation, the patient was free from all danger, and ready to be discharged.

CASE III.—Strangulated Crural Hernia—Operation—Union by the first intention—Rapid cure.—A woman, about forty years of age, came into the Hôtel Dieu with all the symptoms above enumerated of strangulated hernia—hiccough, nausea, vomiting, &c. For several years she has been troubled with crural hernia, which she had occasionally confined with a truss, but which became strangulated, the evening before, in consequence of an effort to lift a burden. Examination revealed a crural hernia, not very painful, turned up over Poupart's ligament; and covered, consequently, by the skin, cellular tissue, superficial fascia, and some lymphatic glands. Attempts at reduction had been made without effect. M. Dupuytren remarked, that the turning upwards of the hernia, over Poupart's ligament, rendered a different mode of applying the taxis necessary. The first efforts ought not to be made from below upwards, in the direction of the crural canal, but from above downwards; always bearing in mind the curved direction of the canal. The surgeon decided on operating immediately.

By the first incision the skin, a little subjacent cellular tissue, and the superficial fascia were divided. A lymphatic gland of considerable size was then brought into view; and as it was situated directly over the tumour, M. Dupuytren did not hesitate to divide it through the middle, although aware that this practice involves the risk of consecutive fistula. The hernial sac was then perceived, and was opened at its lower part; a little reddish-coloured serosity escaped, and the hernia was uncovered. The incision into the sac was enlarged with scissors, first longitudinally upwards, and then to each side in a crucial form. The hernia was of a very simple description, being formed of a knuckle of small intestine, which although of a brownish red colour, had sufficient tenacity to admit of being returned into the abdomen. This was done immediately after the division of the stricture, which was made directly upwards, in a direction parallel to the *linea alba*. It is thus M. Dupuytren divides the stricture in all cases of crural hernia in the female, and always without danger, owing to the absence of the spermatic artery. The rule will not hold good in the male subject; for there the existence of the artery in question obliges us to divide the stricture in another direction; and this direction, according to M. Dupuytren, is from below upwards, and from within outwards. The incision will

then be parallel to the course of the spermatic vessels, which are thus sure to be avoided; but if there be no danger of wounding the spermatic artery, when the strangulation exists at the *inferior* orifice of the crural canal, injury of that artery is to be feared when the strangulation occurs at the neck of the sac, on the *superior* orifice of the canal; for then the division has to be made at a greater depth. In this case, would it not be better (as we once saw practised by M. Dupuytren himself), instead of dividing freely at *one* point, to incise slightly at two or three *different* points. These incisions, which might be less than two lines in extent each, would be equal to a single incision of much greater length, and would furnish sufficient space, with less danger of encountering the vessels.

In the present case immediate union was attempted; and, in spite of the division of the lymphatic gland, in a few days the cicatrization was perfect, and the cure complete. This brilliant success should induce M. Dupuytren to have recourse more frequently, in operations for hernia, to union by the first intention. When this plan is adopted, the sac in general does not inflame more than is necessary to produce adhesion, and it is rare for this mild degree of inflammation to be communicated to the peritoneum. On the other hand, when immediate union is not adopted, the contact of the sac with the air, and with the dressings, must necessarily give rise to a degree of inflammation sufficiently active to produce suppuration, and to affect the peritoneum; and this, no doubt, is one of the principal and most frequent causes of the peritonitis, which carries off so great a number of patients after the operation for hernia. When a portion of intestine is highly inflamed, its return into the abdomen is in general sufficient to remove the inflammation. The soothing contact of the surrounding parts furnishes the best poultice; and why should it not be the same with the hernial sac? To prevent all foreign contact, and restore it to its natural relations, are the most likely means of effecting a cure.

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Foreign Medicine.

M. Rostan's Clinical Remarks on Diseases of the Nervous Centres.

(Continued from p. 752.)

THE disorders above mentioned are not the only phenomena of meningitis. Sometimes, especially in adults, it occasions delirium—perversion of the mental functions; but it is not to be denied that such disorder depends on the extension of inflammation to the cortical substance of the convolutions, or at least on a sympathetic affection of this gray stratum. It is on this subject particularly that the opinion of M. Delays appears to be

founded on positive data; the smallest anatomical knowledge enables us to judge of the necessary connexion between disorders seated in the pia mater, and derangement of function in the cortical substance; this is not to be regarded as an hypothesis, but received with the credit attached to a well established fact. The delirium varies infinitely in its characters; it is, however, more generally furious and noisy than silent; it is general or exclusive, continued or intermittent: it is seldom present at the very commencement of the disease.

In the present state of science it is impossible to determine whether its characters have any uniform relation to the seat of the disease. Coma occurs frequently in the decline of the malady, but hardly ever at the time of its invasion—a fact which militates against the existence of primary acute hydrocephalus, which Dance has lately endeavoured to re-establish. In studying meningitis, it is not sufficient to confine our investigation to the phenomena by which it is directly indicated; the state of the other functions must also be attended to; and it is to the elucidation of the indirect phenomena of this disease that M. Rostan directs his attention. The tongue is usually large, of a rosy colour, and sufficiently moist; the thirst is not urgent; there is loss of appetite, as in almost all inflammatory affections. If the mouth be dry, and the tongue red at the margin, the existence of some complication is indicated. Vomiting occurs chiefly in the first stage, with or without pain in the epigastric region; this symptom, however, is not to be considered as arising from inflammation of the stomach; according to M. Rostan, the vomiting is a consequence of the functional disturbance of the brain, and altogether independent of the state of the stomach. In other respects the digestive functions are not deranged; the belly is neither tense nor painful; constipation, however, almost always exists.

M. Guersant has established that meningitis is a frequent consequence of gastro-enteritis; M. Rostan doubts the truth of this proposition, and can only account for the discrepancy of opinion between M. Guersant and himself, from the circumstance of his own observations having been made principally on adults, while those of M. Guersant were confined to children.

At the commencement of the disease the pulse is full and frequent, in a few days it becomes slower, and finally, when death seems to be approaching, it is again accelerated, but small and more or less irregular. Occasionally the face is flushed, and the conjunctivæ injected. The blood drawn from a vein is frequently covered with an inflammatory crust; the respiration is natural or moaning, and sometimes accompanied with sighing. In some cases the patient utters loud and shrill cries, which suddenly cease, and are repeated at intervals, but which do not seem to be connected with any

particular feeling of distress. Some authors have attached considerable importance to this sign, which M. Coindet has denominated *cri hydrencéphalique*.

The heat is sometimes considerable over the entire surface, at others it is unequally distributed, and alternates with chills. Patients very often complain of flushes of heat ascending to the face, which is for the moment suffused with a vivid colour. Sweats occasionally break out, which are not attended with any remarkable result.

It is not sufficient thus to analyse the more or less important symptoms of meningitis; they must be collected and grouped, and their relations brought together in a picture whose *ensemble* may be comprehended by the student.

In this manner M. Rostan has described meningitis, which may be divided into three stages, each characterized by well marked phenomena. The first stage, which has been aptly denominated that of *excitement*, generally commences with rigor, succeeded by febrile re-action more or less distinct; pain in the head then supervenes, with peculiar brightness of the eyes, increased sensibility to light, morbid acuteness of hearing, agitation and jactitation; convulsions do not as yet occur. With these symptoms are conjoined more or less heat of the surface, thirst, and vomiting. The countenance indicates pain and anxiety; there is an unusual contraction of the eyelids and lips, communicating a caricatured expression to the face, which aids the diagnosis.

In the second stage, called that of *perturbation*, delirium supervenes; there is sometimes a tardiness in answering questions, and a peculiar snappishness in the mode of speaking. The function of motivity is disordered, as indicated by irregularity of muscular action, convulsions, and other symptoms already alluded to. The ordinary duration of this stage is one or two days.

In the third stage, denominated that of *oppression*, or *collapse*, all the phenomena of excitation and perturbation cease; the patient continues for a longer or shorter time in a state of drowsiness or faintness; the organs of animal life appear to be oppressed by a direct and powerful influence. The phenomena of sensibility are more or less diminished; the muscles yield without resistance to the weight of the limbs, which renders the position analogous to that observed in adynamic fevers. At this time the pulse is thread-like, irregular, unequal, and often almost imperceptible; the extremities are cold, and the skin is covered with a gelid clammy sweat—this is a sign of approaching death.

(To be continued.)

THE MEDICAL PROFESSION AS IT IS,
AND AS IT OUGHT TO BE.

To George James Guthrie, Esq.

DEAR SIR—The following observations not only interest each individual of the medical profession, but refer to circumstances which implicate the well-being of society at large.

In making them, you cannot suppose that any feelings of personal hostility towards you influence my breast; for, as proof to the contrary, I have as an individual experienced repeated acts of friendship from you, as well as the most gentlemanly and impartial conduct, both from yourself and the other members of the Board of Examiners of the College of Surgeons, in conducting the examinations of pupils. Moreover, I esteem you as a man possessing no ordinary degree of talent either as a lecturer or a practical surgeon. My present object is to allude to some of the statements advanced by you before the parliamentary committee of inquiry, in reference to some of the base monopolies existing in the profession, suppressing merit, for the good of the few to the injury of the many. As a lecturer to a medical class of no small pretensions either as to number or ability, I deem it a duty incumbent upon me to express my thoughts on these points.

In the first place, sir, as it regards the future constitution of the College of Surgeons, you boldly advise that it should remain as it is (quoting your own words), “a self-perpetuating body,” a sort of a close-borough corporation, as you, I believe did not deny, when hard pressed by Mr. Warburton upon this point. You strenuously objected to the term “self-elected” corporation; but at the same time stated that “the members of the College have no voice in the election of the council” or governing body; “that the old existing members of the council elect a new one;” and, moreover, that the Board of Examiners (ten in number) are elected out of the council according to seniority; and that the new members of the council are elected by the members of the council themselves. Now, sir, with due deference to you, I really think that this mode of election entitles it to the appellations above mentioned.

You assert that the present mode in which the members of the council are elected “is the fairest and the best;” and the only alteration which you propose in the governing body of the College is, that *the meeting of the council should be open* to the “medical commonalty;” which boon, you said, “the members at large would sooner receive than the right of election!!!”

After having stated your objections against certain various plans of election which have been proposed to the council, at different times, you say, “If the council are elected by the whole body of members, all the ob-

jections already stated against the last-named proposals will hold good ;" which, in order to show the inadvertent contradictory nature of your evidence in this respect, I will if you please, briefly mention : they are the following :—" The general body would not be satisfied ; there would be very elderly men chosen, some seventy or eighty years of age ; we should not know where to find the electors, whether in London or elsewhere ; it would cause a general canvass, and lead to electing teachers in hospitals and lecturers only." You then added, that " if the whole body were electors, perhaps the *youngest* surgeon might be chosen. Hospital surgeons would be more frequently elected than they are now ; the profession would become ' a placarding body,' *would be all at daggers drawn* ; open canvass would be attended with a great deal of inconvenience ; the profession would become a political body, and very troublesome."

Why, my dear sir, do you not know that the profession *must* be a political body in a certain sense ? and that every association is, whether belonging to profession or trade, so far as it regards the internal regulations of their own matters of business ?

The assertion, that " they would be all at daggers drawn," is a compliment to the commonalty of the profession, to be sure, which puts us below the par of a ten pound householder. Is it to be supposed that when a meeting for electing or balloting a member is duly advertised in the leading journals, that all who choose, could not meet at the College of Surgeons for that purpose, like rational beings ? Do you not know, sir, that it is monopoly, injustice, and disaffection which begets discord and tumult ? and that if the medical community could have exercised their own just rights, and had individually a vote, there could be no disaffection nor cause for reform or inquiry ? For the real object of reform is to render just rights and privileges to all, thereby satisfying them.

How you could have been so mistaken as to have said that " the members in general would sooner have the privilege of all the meetings of the council being open to them, than the right of election" seems inexplicable, unless it is that in consequence of intimate association, the mental vision of the *medical* aristocracy is as much deranged as that of the aristocracy of the community at large—that they both see things through their own dim and fallacious medium, and are but little acquainted with the actual wants and opinions of the enlightened " commonalty."

You would not admit surgeons who practise pharmacy to be members of the council, nor even to be electors, because you state they are not qualified for the higher branches of the profession—their time is so engaged in pharmacy, that they have not time to practise surgery. But I would ask, my dear sir, do the

majority of general respectable medical practitioners occupy much of their time in actually compounding medicines ? Do they not leave that charge and drudgery to their assistants and apprentices ? And even supposing that they did compound some of their medicines with their own hands, would that take up more time than the employment of those means whereby most hospital surgeons not only gain their appointments, but insinuate themselves into practice afterwards, viz. family and political connexions, money influence, or gaining the private friendship and support of the governors of charities and their families, through the instrumentality of card, dinner, and ball parties ? This is the way in which public appointments are obtained in England—not by laborious professional study night and day, and well tried professional merits, as you have unsuccessfully attempted to insinuate.

Again, let me ask you, sir, did not the illustrious Abernethy administer medicines to his patients with his own hands ? And, have not pure surgeons as many medical cases as general practitioners ? For it is a fact acknowledged by all pure surgeons, that the bulk of their practice consists of medical cases ? All these facts tend to prove that no invidious line of distinction should be drawn between pure surgeons, commonly so called, and general practitioners—that their election should depend upon absolute merit, which must be determined by some public test, conducted by competent judges.

I remain, my dear Sir,

Yours very obediently,

G. D. DERMOT.

Theatre of Anatomy and Surgery,
Gerrard Street, Soho.

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Hospital Reports.

ST. GEORGE'S HOSPITAL.

Case of Epulis.

ANN —, aged thirty-eight, about thirteen years since, after having had several diseased teeth, which were not extracted, began to have a swelling of the gum of the lower jaw, which underwent a gradual enlargement until within the last few months, during which time its growth has been much more rapid. At the present time it occupies the whole of one side of the gum, from the dens sapientiae, which is in a state of decay, to the canine tooth of the opposite side. The tumour is hard and insensible, nor does it occasion any other inconvenience than that which is the effect of its bulk. It contains, upon its external surface, the stumps of several teeth, decayed down to the gum—indeed, the remains of all the teeth indicated, except two which have been extracted. Its size is rather difficult to estimate, but its anterior position protrudes so much as to be very visible on

speaking; its surface is irregularly lobulated, rising to a greater height at the front, where the decayed stumps of teeth in the upper jaw allow it to attain a greater bulk.

Mr. Walker performed the following operation for the removal of the tumour:—An incision was made along the base of the lower jaw, from a little anterior to the margin of the left masseter muscle to the angle of the jaw on the opposite side; from this another incision was carried upwards, leaving, however, the margin of the lip undivided. The flaps thus formed were then dissected off the bone, and reflected upwards. With a small key-hole saw an incision was then made between the lateral incisor and canine tooth in front, and between the last molar and dens sapientiæ behind; these were now connected by an incision extending below the base of the tumour; a groove having thus been made in the bone, a pair of cutting forceps were employed, by which the whole diseased mass was at once removed. The surface of bone thus left, presented some slight irregularities, which were afterwards taken away, as was also the stump of the dens sapientiæ. The surface was then touched with the actual cautery. The edges of the external wound were then brought together by sutures.

Upon making a section of the tumour, it was found to consist of a hard dense texture. It appeared to spring exclusively from the alveoli of the teeth, the texture of the jaw itself appearing to be entirely free from any disease.

No constitutional disturbance followed the operation, and in a few days the edges of the external wound had firmly united.

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WESTMINSTER HOSPITAL.

Anthrax.

JOHN CARTER, aged forty, a hackney-coachman, was admitted into Henry Hoare's ward, June 9th, under the care of Sir Anthony Carlisle. He is a man of a plethoric habit, having generally lived very freely, and has frequently indulged in the use of spirits to excess. During the last month he has felt languid and poorly, his appetite became impaired, and latterly he has had febrile symptoms. A week previous to his admission, swelling and inflammation first shewed themselves on the back, which were attended with pain of a hot, burning-like character.

The inflammation spread from three distinct centres, leading to as many irregularly circular, and elevated, but flattened tumours. Two of these were seated high up on the back, between the two scapulæ, whilst the other was lower down, near the inferior angle of the left scapula. The two larger of these tumours possessed a diameter of about two inches, and the smaller one that of an inch and a half; they had the peculiar brawny

feel pathognomic of anthrax. The size of the tumours, and the severity of the symptoms, were equally increasing up to the date of his admission, when crucial incisions were made into each of the tumours, which gave him great relief. A large poultice of linseed meal was directed to be applied, and he was ordered to take the Mistura Salin. Effervescent.

12th.—*Rx.* Hyd. submur. gr. vj;
Opii pulv. gr. j. M. ft. Pil.
h. s. s.

14th.—One of the carbuncles being very much inflamed and painful, was again incised to-day, and he is ordered to take the following:—

Rx. Confect. aromat.,
Ammon Carb. ā 3 ij;
Mist. camphoræ, ʒ viii. M.
Capt. cochl. ij, ter quotidie.

15th.—The incision has given great relief. Tongue covered with a whitish fur; great thirst; he drinks freely of toast-water; pulse eighty-four, feeble.

18th.—Much better; tongue only slightly furred. As the bowels have not been relieved lately, he is ordered to take a common aperient draught.

23rd.—Much better; the inflammation has almost entirely subsided, and the supuration nearly ceased. The poultices have been discontinued, and the sores are now dressed with adhesive plaister, and they appear disposed to heal. Pulse, sixty, full, but not strong; is sitting up to-day.

30th.—During the last week the patient has made a gradual and satisfactory improvement, and to-day is considered so well as to be discharged as cured.

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Dietary for Children from Three to Ten Years of Age, in Sussex.

Sunday, breakfast, twelve ounces bread, half pint milk gruel; dinner, seven ounces rice pudding; supper, half pint milk gruel.—Monday, breakfast, twelve ounces bread, half pint milk gruel; dinner, seven ounces suet pudding; supper, half pint milk gruel.—Tuesday, breakfast, twelve ounces bread, half pint milk gruel; dinner, two and a half ounces mutton, half pound potatoes; supper, half pint milk gruel.—Wednesday, breakfast, twelve ounces bread, half pint milk gruel; dinner, seven ounces rice pudding; supper, half pint milk gruel.—Thursday, breakfast, twelve ounces bread, half pint milk gruel; dinner, two and a half ounces mutton, half pound potatoes; supper, half pint milk gruel.—Friday, breakfast, twelve ounces bread, half pint milk gruel; dinner, seven ounces suet pudding; supper, half pint milk gruel.—Saturday, breakfast, twelve ounces bread, half pint milk gruel; dinner, two and a half ounces mutton, half pound potatoes; supper, half pint milk gruel.

Dietary for Children between One and Three Years of Age.

Sunday, breakfast, ten ounces bread, half pint milk gruel; dinner, twelve ounces mutton broth with rice; supper, half pint milk gruel.—Monday, breakfast, ten ounces bread, half pint milk gruel; dinner, five ounces suet pudding; supper, half pint milk gruel.—Tuesday, breakfast, ten ounces bread, half pint milk gruel; dinner, twelve ounces mutton broth with rice; supper, half pint milk gruel.—Wednesday, breakfast, ten ounces bread, half pint milk gruel; dinner, seven ounces rice pudding; supper, half pint milk gruel.—Thursday, breakfast, ten ounces bread, half pint milk gruel; dinner, twelve ounces mutton broth with rice; supper, half pint milk gruel.—Friday, breakfast, ten ounces bread, half pint milk gruel; dinner, five ounces suet pudding; supper, half pint milk gruel.—Saturday, breakfast, ten ounces bread, half pint milk gruel; dinner, twelve ounces mutton broth with rice; supper, half pint milk gruel.

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THE RAPIDITY OF THOUGHT.

ALL popular and settled notions, however unfounded, like prejudices early imbibed, are with difficulty eradicated. Among these may be instanced the dictum of the astonishing rapidity of Thought, which is almost proverbial, and generally believed: even Mr. Tooke, Vol. I., p. 28, conforms to this established maxim: "Words have been called winged: and they well deserve that name, when their abbreviations are compared with the progress which speech could make without these inventions; but when compared with the *rapidity of thought*, they have not the smallest claim to that title." By calculation, the progress of light from the sun and other luminaries is said to be ascertained; and likewise the rate at which sound travels: but hitherto no contrivance has been fabricated to estimate the rapidity of thought. If the succession of our thoughts should be more rapid than they can be distinctly apprehended, confusion must ensue, and their rapidity would render them useless. Our perceptions are regulated by the same law. If the prismatic colours be painted on a surface which is revolved with great rapidity, the individual colours will not be apparent. The succession of sounds to a definite number, may be severally distinguished, in a certain interval: but if the succession be increased beyond the power of discrimination, they will impress the ear as one uniform sound. The same principle must regulate our thoughts, whether they be composed of ideas or words, or, if it be possible, of both jumbled together. It does not appear that our thoughts for any useful purpose, which must imply their communication to others, or for a record in written characters, can be more rapid than the intelligible pronunciation of the words themselves, and which,

when delivered in quick succession, leave the shorthand-writer behind.—*Dr. Haslam on Thought.*

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Case illustrative of the Effect of Frictions with Veratria Ointment in Palpitation, communicated by William Porter, Esq., Surgeon, Gower-street.

A LADY, about twenty-eight years of age, has suffered from a dropsical affection for about eighteen months, accompanied with a considerable degree of palpitation of the heart and irregularity of the pulse, and these symptoms appeared to be connected with irregular menstruation, from which the patient had suffered for some time. The lower extremities were cedematous, and there was difficulty of respiration and general nervous excitement. In the treatment of the disease various measures were employed without much benefit, until about two months ago, when the cedematous state of the extremities was much relieved by the use of diuretics and drastic purgatives; the palpitation, however, continued the same as before. As this latter symptom was peculiarly annoying to the patient, the attempt was made to remove it by means of an ointment made with twenty grains of veratria to one drachm of lard, and a small part of this was ordered to be rubbed over the region of the heart for ten minutes night and morning. After the second or third friction the palpitation disappeared along with the irregularity in the pulse; this took place about eight weeks ago, and although the patient is still unwell, it has not returned.—*Turnbull on the Ranunculaceæ.*

BOOKS.

Lectures on the Diseases of the Urinary Organs. By Sir Benjamin Brodie, Bart., V.P.R.S., Serjeant Surgeon to the King, and Surgeon to St. George's Hospital. Second Edition, with Alterations and Additions. 8vo. pp. 329. 1835. Longman & Co.

Practical Examinations on the Immediate Treatment of the principal Emergencies that occur in Surgery and Midwifery, systematically arranged. Part the Second. By W. S. Oke, M.D., and extra Licentiate of the Royal College of Physicians in London. 8vo., pp. 163. 1835. Longman & Co.

A Further Inquiry concerning Constitutional Irritation, and the Pathology of the Nervous System. By Benjamin Travers, F.R.S., Senior Surgeon to St. Thomas's Hospital. 8vo., pp. 444. London. 1835. Longman & Co.

A Treatise on Pulmonary Consumption; comprehending an Inquiry into the Causes, Nature, Prevention, and Treatment, of Tuberculous and Scrofulous Diseases in General. By James Clark, M.D., F.R.S., Consulting Physician to their Majesties the King and Queen of the Belgians, &c. &c. London, 1835. 8vo., pp. 399. Sherwood, Gilbert, and Piper.

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VOL. VII.

SELECT LECTURES,

FROM

M. BROUSSAIS'

*Course of General Pathology and Therapeutics;
translated and revised*

By JAMES MANBY GULLY, M.D.

LECTURE VIII.

THE prognosis of rheumatism has reference to its degree. I can certify to you, that when recent, and accompanied with a certain degree of heat, it may be arrested by the same means that are effectual in any other inflammation. I have cured hundreds of cases by leeching and cupping; the latter succeeds well in the flat muscles, but, in thick muscles, leeches are preferable, because they are capable of withdrawing blood from a greater distance. To place the two means in comparative juxtaposition, and enable you to form a judgment of them, I will quote the case of a man of seventy-two years of age, lately in my service, who fell on his right hip, and suffered from a muscular inflammation; this was first treated with cupping and poultices, which did not give the slightest relief; whereas a free application of leeches, on the following day, brought the patient round immediately—a warning fact to those who affect to despise the remedial agency of leeches. And, if it please those individuals, I would maintain, that when the inflammation is recent, though not phlegmonous, local bleedings are most strikingly influential: though it is but fair to state, that they do not succeed when the disease is chronic, the fact being, that in the latter case the blood leaves the part in proportion as it proceeds to atrophy, and as the vessels become obliterated, thus presenting no appropriate case for leeching. But are we on this account to violently stimulate the patient, to set him on fire, or expose him to the reverberations of extreme heat, like spitted game? Not at all; for you will thereby bestow on him the gift of some visceral inflammation. Were it possible to communicate to him an uniform and

sustained heat, such as exists in hot climates, well and good; he would speedily be cured. This any one will maintain who has observed the progress of the disease in those climates, though it is impossible to obtain such evidence in northern regions. Many of our rheumatic patients go to warm latitudes and get well, return to cold ones and relapse. Heat, therefore, is the agent more especially appropriate in the treatment of the disease in question. But, because external heat cures, would you infer that it is necessary to heat your patients internally—to give them stimulants, sudorific decoctions, tincture of guaiacum, &c.? This would be all very well, if we were sure that the stimulation of the viscera would not remain predominant, but would always produce sweating. Suppose that you thereby succeeded in giving some relief, have you not, during the winter, the almost incessant action of cold, and can you promise to resist the cooling influence of a medium like our's by means of sudorifics? If so, you will be mistaken; neither against rheumatism, nor against gout, are there any specific remedies taken from the list of drugs. You must act upon the skin, or, giving your remedies a different direction, act so as not to endanger your patients' life by presenting them with a chronic gastritis. I repeat it, I have had rheumatic patients under my care who did well by being kept warm, by using frictions, and taking emollient or gelatinous baths, to which aromatics were added, or which were charged with sulphurous and gaseous matters; after which the surface was covered with cotton clothing, which kept up the transpiration and diminished the general suffering. If the pains were excessive, I gave them narcotics, having a care not to harm the stomach. I once applied this treatment to a general officer, who went on well with it, but thought it too tardy in progress, telling me that he once met with a person who cured rheumatism by a mixture of sudorifics and purgatives. He took this mixture, which gave him a gastritis and hypertrophy of the heart, subsequent to which a pulmonary congestion came on, and he died.

To talk of withdrawing a rheumatic humour that has been concentrated on the viscera, is mere nonsense, and moreover leads to the compromise of your patient's life. Persons thus treated come to you with some acute affection, the cause of which you do not detect, but only the consequent mischiefs; you behold an ataxic fever, a dothi-nentery, an apoplexy, the serious nature of which is in striking contrast with the innocuous character of the primitive disease; you wonder how inflammation has come to be so fiercely developed in the viscera—yet, in the commencement, there was nothing more than a rheumatism! This should make you feel that no disease whatever is inconsequent or to be neglected, and that it is by approximating things small with great that you are to become real medical men, and not by writing forty or fifty accounts of the most serious disorders, having no care for the minor ones, for the precious reason that they are not worth the trouble.

To sum up; when recent and slight, rheumatism is removable by leeches; when of longer standing, it is not so easily got rid of. But at what epoch does it cease to be thus removable? This it is hard to answer; to judge on the question you must possess a fact and habit of observation, which I could not impart to you in one nor even in a hundred lectures; nothing but good clinical instruction can supply it.

When the disease is chronic and the parts become cold, a local heat must be maintained; warm baths, slightly exciting poultices, and vapour baths, must be employed, with narcotics internally, if there be great pain; a nutritious diet should be ordered sufficient to keep up the circulation, but not so stimulating as to induce phlegmasiæ; and, above all, care should be had not to torment the visceral apparatus by medicines. The freshly drawn skins of newly killed animals, warm sand and milk baths, &c. all act by maintaining a gentle external heat, which opens the skin and calms the irritation. Nature effects the rest. Fortunately the warm weather comes in aid after a few months, and the patients come round. As regards internal affections, the same theory holds as in gout. If the pains are unattended by phlegmasia, sedatives are given: if they are actual phlegmasiæ, you attack them with antiphlogistics; if there is transfer or metastasis internally, you establish blisters or other revocations on the part that has been deprived of its energy.

Neuralgiæ.—Under the influence of cold, irritation is sometimes observed to predominate in the external nervous branches and cords, and you have then a kind of nervous rheumatism. Certain nerves are more subject to it than others. How does it occur? Not more mysteriously than in the preceding tissues. The peculiar pulp of the nerves is enveloped in a gelatinous, cellulo-fibrous tissue, denominated neurilema, the structure

of which is nearly resembling that of the aponeuroses and other fibrous tissues, as shown by Bichât. The impress of cold being made on this enveloping tissue, begets in it an irritative movement, which may become an actual inflammation; there is then an external neuritis, and this sooner or later implicates the central nervous substance. It is frequently complicated with rheumatic irritation, but may exist without it. We will first consider it in its isolated character, and shall then be able better to conceive of it in its complicated condition.

Sensitive persons who have suffered from cold, particularly of the feet and hands, often have lancinating pains along the limbs, pains that are the preludes of neuritis. A medical man readily recognizes them: I have several times felt them, and could not mistake them again. If one can have such pains from the impress of cold, you need not be astonished that the irritation of which they are the evidence is raised to the level of a phlegmasia, becomes predominant in the nerves, and gives rise to nervous rheumatism. This is more particularly observed in the thigh, and then has the name of sciatica; the seat of it is easily pointed out, inasmuch as it follows the track of the nerve. Pressure with the finger causes a prolongation of the pain in it, and a kind of electric movement along its course; at the same time the muscles contract. Varieties in the pain may obtain according as the main point of irritation is higher or lower, according as it affects the internal or external, the superficial or deep-seated nervous fibres. When sciaticæ are very inflammatory the pains are agonizing; the muscular contractions aggravate them and cause them to pass through the nerves like electric sparks, particularly if the nerves are in communication with the visceral nerves; the slightest movement is intolerable, and the spasms may extend to the brain. If the disease is not overcome, muscular irritation is superadded and becomes inveterate, the limbs become bent, contracted, and atrophied. Sometimes the sensibility and phlegmasia are so concentrated in the most painful parts that gangrenous eschars form. These phenomena are more usually observed in the thighs and hips; but the brachial nerves are also liable to them, and the phlegmasia that possesses them may be complicated with that of the muscles. When the inflammation is acute, there is heat and gorging in connexion with the seat of the disease. If remedies are not applied, it very rarely ceases of itself; the same happens in the upper as in the lower limbs—the nerves become disorganized, the muscles retracted, and suppurations and eschars may form.

Neuralgiæ of the face are of two kinds; one involving the eye and forehead, in which there are convulsive movements of the eyelids, acute pains in the nervous twigs of the ophthalmic branch of the suborbital and superior maxillary; the other affecting the in-

ferior maxillary branch, its dental and facial twigs, and accompanied with the same kind of pains and contractions, of varied violence, of the muscles of the same side of the face.

In all these cases, but especially in the former, the irritation may be communicated to the nervous centres, and endanger life.

What does dissection show, and what is our prognostic in these affections? Dissection discovers inflamed nerves, red or black, according to the degree and duration of the inflammation; disorganized nerves, sometimes exhibiting solutions of continuity in the branches and cords, but particularly in the large trunks. In a less inflammatory shade, we meet with infiltrations of gelatinous and albuminous matter, a kind of ganglions that have become developed, and are, as it were, incrustated with earthy matters—in short, we meet with all the disorders of sub-inflammation. Sometimes, in consequence of the violence of the phlegmasia, a phlegmonous abscess forms, in which the nerve is comprehended and disorganized. These alterations, the varieties of which are numerous, and not described here as in a treatise on pathological anatomy, lead to a miserable and often excruciating suffering. This may suffice for the prognosis.

In the treatment, leeches stand first. I am sorry for those who do not patronize them, but it is no less certain that they reduce this inflammation both in the leg and in the arm and face. I exhibit proofs of this on all possible occasions, and such are very frequent in my military practice. Disorderly privates, that have been exposed to an icy wind for several hours together, are often brought to me in a neuralgic state, with such violent pains and contractions as to render it impossible to touch or shake them in the least without causing intense pain. Now, I speedily cure these with the so much slandered leeches; but there should be no chariness of them; fifty, sixty, eighty should be applied at once, and repeated if needed; a small number produces no effect. We then employ emollient poultices and powerfully narcotic ointments, and in two or three days the disease will have disappeared. Should you be very nice with it, and, instead of this energetic treatment, combat it with antispasmodics, in conformity with the vague precepts of a by-gone pathology, you will see it aggravated, and perhaps propagated over the economy, and then, not having been able to subdue it in its simple condition, what will you do now that it is complicated?

Neuralgia depending on some external violence, as a blow, a fall, an effort, intense heat from the close proximity of a furnace or fire, is to be similarly treated. If, after employing these means to the proper extent, you have not entirely succeeded, you have still revulsives, rubefacient ointments, blisters, and particularly moxas, which should be repeated, without burning through the

entire thickness of the skin; but do not be in too great a hurry to employ them, for you may retard or even altogether obviate the cure. I have often completed cures already half effected by leeches, by means of acetate of morphia used in the endermic method over the course of the nerve or on the most painful portion of it.

All these means failing, we fall into empiricism, and give narcotic preparations, emetic and sudorific mixtures, Meglin's pills, or unknown formulæ. But whilst yielding to the wishes of the patient in administering these various remedies, we must never lose sight of the organ in which they are to be deposited, the stomach; for it may thereby become inflamed or contract a predominating nervous irritation. In fact, stimulating treatment not only creates gastritis, but neuroses of the stomach as well, that are obstinate in kind and serious in character. In such case, the only refuge is in a warm climate.

A last resource is found in the section of the nerve; you may do it in superciliary, suborbital, or maxillary regions; but can you cut across the ischiatic, the brachial, the median, &c.? Assuredly not; the most that you can do is to take away any ganglion or tumour that compresses the nerves in question. Here, then, we must be content with local bleedings, revulsives, sedatives, change of climate, and certain remedies attended with more or less danger, and therefore to be used with the utmost caution.

Regarding neuralgiæ that are owing to the suppression of some hæmorrhage, the menses or piles, to the cessation of an external suppuration or secretory irritation, of which I have not spoken, the only point they exhibit in addition to those mentioned is the indication of revocative means, such as leeches to the anus or vulva, sinapisms or blisters on the seat of some dartre, or of some suppressed suppuration. This rule of action applies in all cases where a greater irritation has succeeded to a lesser one.

Lymphatic Inflammation of the Legs.—This disease is also developed after the impression of cold, which is its chief though not its sole cause, for it may be induced by forced exercise or contusions. Its mechanism resembles that of the preceding affections. It is an irritation that seizes on the lymphatic vessels and ganglions, leads them to inflammation and gives rise to a congestion and painful condition of the whole of one thigh or of both, effects that follow the more certainly if the skin is in a state of perspiration at the time the cold acts upon it. This is the case with lying-in females, who are more especially subject to it. When cold seizes them after delivery, and when a transfer of action from the uterus to the mammae is going on, which transfer is always accompanied with copious sweats, they may be attacked with this affection, which among the English is called *phlegmasia alba dolens*.

One or more red lines are observed along the internal part of the thigh; a series of smaller ganglions is felt, and the cellular tissue is tumefied. If the phlegmasia does not predominate, there is a tense œdema unyielding to the hand, and excessively painful from the quantity of nerves that accompany the ganglions and vessels; the irritation is communicated to the heart, and there is a certain degree of fever. This irritation may be established internally, and give rise to a visceral congestion and phlegmasia that becomes predominant, and is attended with great danger. The external phlegmasia is in itself a serious matter demanding immediate arrestation, for in a very short time it is apt to cause extensive and numerous abscesses, purulent collections and absorption of pus, succeeded by hectic fever, provided death has not taken place during the acute stage; thus, there is the local danger and the danger of visceral congestions. The disease is not, however, so rapid in its progress; after a few days, the pain may abate and an engorgement and subinflammatory state remain, approaching to elephantiasis and tending to the degeneration of the lymphatic tissues.

What treatment should we employ? Leeches again. They only withdraw a blood mixed with serum, but they nevertheless produce a rapid disgorging, followed by resolution. True, we thereby miss the opportunity of relating some long tales and beautiful dissections; but is not the cure worth them all? And this is more certain, as we have been careful speedily to attack the first points of irritation; for inflammation, like a fire, has always a starting point, and must be attacked at an early period, if we hope to stay its progress. After leeches you have compression, which, prudently employed, and at the fit time, may be greatly advantageous. But should a decidedly chronic state declare itself in spite of these means, or because they have not been employed, the case puts on a more serious aspect. At present I shall not enter on this point, but reserve it for some other time.

Erysipelas of new-born Infants.—It depends on the same causes, and is developed in the same manner as the preceding disease. Some have forbidden such children to be bled, but they are wrong; two or three leeches may be advantageously applied to the congested points; nor is it in this particular case that their utility is exhibited. Children often come into the world with a decided inflammatory tendency. A monograph has lately been written on this subject, as if it were something new, though it is a long standing one in the physiological doctrine, which, long ago, maintained that children are often born with all kinds of phlegmasiæ, acute or chronic, apparent or non-apparent. When observed, they should be combatted by antiphlogistics, as in adults, proportioning the means to the degree of

activity and the powers of the little individuals; for there is in them, in regard to vital resistance and the power of supporting losses of blood, differences analogous to those remarked in persons more advanced in age.

We have beheld inflammation in the external parts, in the skin, in the subcutaneous cellular tissue, the articulations, the muscular and aponeurotic tissue, and the nervous cords of the limbs, particularly in the larger ones. One fact must have struck you, that the fever is always in a direct ratio with the external inflammation. In fact you have seen, that a slight inflammation causes no fever, that a greater induces it; that when the inflammation that has excited the fever has been reduced by local means, the fever ceases; that if any cause reproduces this inflammation, and gives it a fresh impetus, the fever re-appears. In peripatetic inflammations, such as those of the articulations and muscles, you have seen the fever appear with the local inflammation, and disappear with it. Together with the fever, you have always observed lassitude, a derangement of the functions of the stomach, an alteration of the principal secretions, the sweat, the sebaceous matter of the skin, the urine, and the mucus of the tongue. You may have been able to judge by the disorder of the appetite, that the secretions of the digestive canal are also deranged—a fact that receives additional confirmation from the declaration of the patient that he has sometimes a bilious taste in sometimes a clammy condition of the mouth, when irritation existed in the stomach, and that he has nothing of the kind when that irritation disappeared. We have also spoken of glandular lymphatic inflammations, and shown that they ought not to be taken from the general rule—that they depend, as do the others, on an irritation applied to the exterior of the body; that, in like manner, they occasion fever and disordered secretions, and that these phenomena disappear with them.

Such are the leading facts that would strike you in this somewhat abridged, but sufficiently explicit relation that I gave you of the phenomena of external inflammations. On one point I laid particular stress—that the danger here is in a ratio of the rapidity and extent of the inflammations, because the internal disorder is always proportioned to them; and on this other point—that the visceral inflammation supervening on them may become the predominant affection, and compromise life. This is a standard proposition, and may be adduced as the leading and most important truth of our medical epoch.

As regards chronicity, you have seen that when the inflammatory state was extinct a less active irritation often remained, which does not pass rapidly towards suppuratory

disorganization, but which tends to denaturalize the nutrition of the parts, and that then the disease was constituted of a sub-inflammation. These details I shall reproduce under the head of sub-inflammation, and shall endeavour to prove that these irritations should be considered in the sub-inflammatory as well as in the inflammatory state.

I told you, with reference to the treatment, that whenever the physician comes in time to circumscribe the inflammation, and attack its two fundamental elements, congestion and pain, he puts a stop to the morbid scene, and has nothing to fear from the propagation of the irritation to the different parts of the body, and therefore nothing to fear for the life of his patient; but that if there existed in the individual affected with an external phlegmasia, a disposition to an internal one, or if he already had one, the former aids the development or aggravation of the latter, and the patient may be carried off, notwithstanding every care. This question, however, I shall more fully enter upon when we come to the account of internal phlegmasia, in order to arrive at which more gradually, we now proceed to the consideration of the inflammations of the mucous apertures, in which inflammation is more nearly situated to the viscera, and more generally affects them. Indeed, it is sometimes difficult to say whether these inflammations, as well as more external ones, do not primarily spring from the viscera; but so soon as you ascertain that the febrile disorder and derangement of the functions have appeared subsequent to them, the distinction is thereby established, and you enter upon the question we are now upon.

I have made no mention of the external secondary inflammations, such as small pox, scarlatina, measles, &c., because they are only episodes of some internal inflammation that always precedes them, and you ought never to confound with them the cases of external primitive inflammations that are accompanied with a predisposition to visceral irritations, or with already formed internal phlegmasiæ; this would be taking the effect for the cause, or a simple coincidence for a result.

We now, therefore, proceed to the inflammations that are seated in the origins of the mucous membranes; this will lead us to those of the viscera. And first, of the inflammations of the genito-urinary mucous membrane.

Urethritis.—In placing urethritis in this category of inflammations, I only speak of that which is not specific, inasmuch as I carefully exclude such phlegmasiæ from the descriptions I give. I only enter upon the pure and simple inflammation of the mucous membrane of the urethra, which may be either acute or chronic, and in this respect

is similarly characterized with other inflammations.

The causes of this disease are excessive excitations of the urethral gland, both externally and internally—those caused by the venereal action and masturbation for instance. To these a third cause may be added, the action of bougies and irritating injections in the urethra; I see no others that can be adduced. To say that urethritis consequent on coition is the effect of the absorption of a virus during the act, is advancing what cannot be proved; for some women affected with vaginal inflammation give urethritis to certain individuals, and do not give it to others; and again, some women, who have neither vaginitis nor urethritis, nevertheless give the latter to men: this is an undeniable fact.

Urethritis is more particularly apt to occur in youth, a period of life when the mucous membranes are more irritable, and the abuses of coition and masturbation are freely indulged in. It is well known that vaginal phlegmasiæ, even such as are scarcely felt by the woman, may yet communicate urethral inflammation. As regards those that are owing to the introduction of irritating injections into the urethra, and which may be artificially produced in animals by injections of chlorine, soda, or irritating salts, they are seen in man after similar modifications, after stimulating injections employed as remedies in some disease of the urethra or bladder. I am acquainted with a person who was sent last year to Barges, and was recommended to inject the waters of the place; the consequence was, that he contracted a violent urethritis. It may also be produced by the mechanical irritation of a bougie or sound. You will perhaps say that this kind of urethritis has not so regular a progress as that which depends on excess in coition, but there is no proof of this; sometimes they are regular in progress, at others not: I have seen many that were produced by masturbation, perfectly regular in their progress. As there is much darkness on the subject, you must stay by what is the actual case, and not seek to establish impossible distinctions.

The characters of urethritis are in the first place the four general ones of tumefaction, redness, heat, and pain. It sometimes begins in the prepuce and gland, and is propagated along the urethra to the fossa navicularis; in such cases, an itching sensation with increase of venereal appetite is often experienced two or three days before anything is felt in the urethra itself.

On examining the prepuce and gland you find a mucous and purulent oozing with the four inflammatory characters. At other times the inflammation commences in the urethral canal, without any previous appearance at the gland; this depends on the manner in which the urethritis has been contracted. The irritation once established

propagated along the canal to its membranous portion, where it ordinarily stays, though it may extend further, and even into the bladder. Nervous or enervating phenomena are first experienced, painful sensation of the penis, a desire for coition, and then disgust of it, tension and hardness of the urethra, excessive sensibility of the mucous membrane, preventing the excretion of the urine, constriction of the bulb, and frequently in the commencement, constipation.

We will first take urethritis in its greatest severity; for it has, like all diseases, numerous shades, and is exhibited with as many aspects as there are individuals of varied sensibilities; it even appears in different degrees in the same individual when he has been several times attacked with it. If he is robust, sanguineous, and previously exempt from the inflammation, and has got it by some great irritation, he has it in its extreme violence; if he has it again the year after, it is less inflammatory; and if he has the luck to contract it every two or three years, it is gradually moderated and finally ceases to be acute. You may if you please make so many entities of these different shades. In the highest degree there is dysuria and even ischuria; it is an indubitable fact, that in excessive urethritis the kidneys almost cease entirely to secrete urine, and this should teach us that there is nothing to fear from the fulness of the bladder imagined by some. Moreover, as the general functional activity is increased, an absorption of the aqueous parts of the urine takes place. The patients in vain endeavour to make water: they either dare not or cannot. When the spongy part of the urethra becomes hard and tense, from the irritation of the mucous membrane, the erections are extremely painful, the urethra is no longer distensible, and the penis is curved downwards, constituting *cordee*. The disease having arrived at this degree, the irritation may be disseminated so as to produce fever, which however, is moderate, as the inflamed surface is small. Pay all attention to this material fact: the fever is proportionate with the extent of the inflammation, a minute phlegmasia produces no fever, a stronger one a moderate degree of fever, and a severe one a great degree of it. In this instance we have frequent pulse, the tongue is covered with mucosities, the secretions are disordered, the patient has pains of the loins, and gives evidence of commencing gastric irritation. After a variable number of days, according to the treatment, this excitation yields; mucus begins to flow, and becomes more and more opaque up to the twelfth or fifteenth day, when it is altogether so, and the disease has the characters of catarrh. Gradually the urethritis diminishes, and if not combatted, terminates by resolution in thirty to forty days; a minute finishing discharge remains, and persists for a variable period, becomes trans-

parent, and is completely dissipated. If the inflammation is not great, and the difficulty of passing water but slight, with only a small degree of redness, and minute mucous concretions at the extremity of the urethra, the discharge may continue for a longer period.

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LECTURES
ON THE
PHYSICAL EDUCATION AND DISEASES OF INFANTS,
FROM BIRTH TO PUBERTY.

BY DR. RYAN,

Delivered at the Medical School, Westminster Dispensary, Gerrard Street, Soho;

Session 1834-35.

LECTURE XLIV.

*Diseases of the Digestive Organs, continued—
Congenital Diseases of the Stomach—Inflammations—Vices of Conformation, and Intra-uterine Diseases of the Intestinal Canal.*

GENTLEMEN—We have next to consider inflammations of the stomach, and vices of conformation, as well as the congenital diseases of the intestinal canal, and the remaining part of the digestive organs.

Inflammations of the Stomach.—Gastritis or inflammation of the stomach is a very common disease of new-born infants, and of those that are very young. The mucous membrane is the part first affected, but when inflamed, it presents a variety of forms, which may be divided, like those of those of the mouth and throat. 1. Erythematous gastritis; 2. Gastritis, with alteration of secretion (*muguet*); 3. Follicular gastritis; 4. Gastritis, with disorganization of tissue.

1. *Erythematous Gastritis.*—Erythematous inflammation of the stomach presents itself in a ramiform or capilliform injection, in red patches of various sizes, in irregular lines, or in numerous red spots, which may be distinct or confluent. These different appearances may or may not be accompanied with tumefaction and friability of the mucous membrane. The mucosities of the stomach are sometimes thick, and more abundant than in the ordinary state; but this symptom is not constant. The seat of the ramiform redness is in the vessels of the stomach, that of the capilliform in the ramifications of the capillaries; that of the patches or spots or the lines, and red points in the proper tissue of the mucous membrane, and, as M. Leuret has well observed, in the papillæ or villosities of that membrane, which may be sometimes slightly tumefied. Gastritis may however exist without any swelling of the villosities.

It is important to state that the ramiform inflammation is the slightest of all, and that all the others are most intense.

All these inflammations may exist at the same time, or may be observed separately, and are often the precursors of profound disorganization or transformation of tissue.

We should distinguish the different forms of gastritis from passive congestions, and to accomplish this, we should recollect the seat of the redness and the fulness or vacuity of the vessels of the abdomen. Congestions are most apparent in the most dependent part of the stomach, and there is a similar condition in the vessels of the digestive tube, in the great abdominal vessels, and the right cavities of the heart. Inflammation or active redness exists independently of these conditions, and is often accompanied by tumefaction or friability of the mucous membrane.

Erythematous gastritis is generally accompanied by vomiting, either as soon as drinks have been swallowed, or in some time afterwards. There is generally pain on pressing the epigastrium, though this symptom may be absent; and what is still more remarkable, there may be but occasional vomiting, and no febrile symptoms whatever. It is therefore very difficult to distinguish erythematic gastritis during life, and in many cases dissection alone reveals it. The disease may be acute or chronic, and succeeded by ulceration, gangrene, or ramollissement or softening of the mucous membrane.

Enteritis, according to M. Billard, is the commonest complication with gastritis, for in a hundred and fifty cases of inflammation of the digestive tube, inferior to the diaphragm, or, in other words, of the stomach and intestines, there were ninety cases of gastro-enteritis, fifty of enteritis without gastritis, and only ten cases of gastritis without enteritis. We may fairly conclude from this calculation, that in cases of enteritis there is often at the same time gastritis. The diagnosis is therefore difficult, but the treatment for gastritis and enteritis is fortunately the same. This I shall describe immediately, when I shall have given the pathology of the other forms of congenital gastritis.

II. Gastritis with alteration of Secretion, or Muguet of the Stomach.—I have stated, when speaking of stomatitis or inflammation of the mouth, accompanied by change of secretion, that this form of inflammation was peculiar to the mucous membrane. I also stated that it might present itself in the mucous membrane of the mouth, throat, œsophagus, stomach, intestines, and all portions of the intestinal and other mucous membranes. This form of inflammation is, however, more rare in the stomach than in the mouth or œsophagus; for M. Billard informs us, that in 214 cases of muguet, which he examined in 1826, at the infirmary of the Foundling Hospital of Paris, he only saw three examples of the disease in the stomach, and two in the intestinal tube; and

he inquires whether the contact of the air on the inflamed mucous membrane of the mouth might account for the frequency of the disease in that part? He does not, however, attempt to answer the question*. He gives the histories of three cases of the disease in the stomach in which the morbid appearances were exactly similar to those in the mouth, which I described on a former occasion.

III. Follicular Gastritis.—This form of disease is similar to that of the follicles of the mucous membrane of the mouth and œsophagus. The follicles of the stomach are isolated and not in clusters, as in the mouth, œsophagus, or small intestines.

When the follicles of the stomach are inflamed, they appear elevated in the form of small, white, round, granulations, which terminate in blackish points, and these are their external orifices. As the inflammation advances, they terminate in ulceration or some other disorganization.

M. Billard met with fifteen cases of this disease; eight of the infants were from four to six days old, the rest were from eight to ten, and one was aged three weeks.

There was no vomiting, no fever, but great debility; and there was another infant who vomited a sanguinolent and dark fluid.

IV. Gastritis with Disorganization of Tissue.—The most frequent disorganizations of the stomach, consequent to gastritis are, gangrene and gelatiniform ramollissement or softening.

Gangrene of the Stomach.—This disease is rare in infants at the breast. MM. Denis and Billard have however described it.

Gelatiniform Ramollissement.—This disease was first accurately described by Professor Cruveilhier, and was often seen by M. Baron at the Foundling Hospital of Paris. The disease consists in the reduction of the mucous membrane into a sort of thick, soft pulp, like jelly, and the parietes of the stomach or its coats are so thin and fragile, that the least traction or pressure perforates them.

This state is accompanied by symptoms of intense inflammation. It is in the most dependent part of the stomach, and is supposed by Billard to be aggravated by the deposition of serous fluid in the coats of the organ at this part. He holds that perforations may occur in this position, which may be followed by sudden death, and that the disease may appear in very young infants,

* This able pathologist seemed to be tainted with the exploded notion, that the influence of the air on wounds, ulcers, and cavities was most injurious. The strictures of John Bell, of Thomson, in his work on Inflammation, which are recorded in their works, and in Cooper's Dictionary, totally disprove this opinion.

dom necessary, —
unless when enteritis is also present, and
even in this disease they must be used
sparingly and with caution. Two or three
leeches applied to the epigastrium or ab-

diately before birth is much less
tends to the jejunum, and is diminished in
the ileum. The jejunum presents marks of
the valvulae conniventes—the villusities are



marked; we often find isolated muciparous follicles in the jejunum, sometimes as large as the head of a pin, and almost always whitish: the follicular plexuses are slightly prominent, and also whitish, and sometimes punctuated with black, as observed in adults. The black spots are most common in the extremity of the ileum; the ileo-cæcal valve is prominent, and the aperture which it surrounds is very strait. In the greatest number of infants a crow's quill will scarcely pass through the aperture, and this opening strongly opposes the passage of fæcal matter or gases from the large into the small intestines. We may convince ourselves of this fact by passing water from the small into the large intestines, and from the latter into the former; the fluid readily passes from above downwards, but there is an insurmountable obstacle to its return from below upwards. The cæcum and large intestines do not present the characters which distinguish those of the adult.

The mucous membrane of the intestinal tube gradually changes its colour after birth; it acquires a milky whiteness, and remains as if covered with short hairs for some time. During the whole of the first year, the inner surface of the tube is remarkable for this appearance, and for an abundant secretion of mucus.

The contents of the intestinal tube of an infant at birth vary in their colour and consistence. We usually find, in the duodenum and jejunum, thick, whitish mucosities adhering to the sides of the intestine, sometimes in circumscribed patches, and at other times in diffused layers. These matters are generally yellow, and probably coloured by the bile; but there are often small greenish masses, which are found in the intestines long after the expulsion of the meconium. They have been observed in an infant eight days old; they are not irritating, as the part of the intestine with which they are in contact is not inflamed. We also often find, near the ileo-cæcal valve, in the infant about to be born, an accumulation of yellow frothy fluid; the large intestine being filled with meconium, or the dark green fluid which is speedily evacuated after birth in the majority of instances. Such are the natural appearances of the internal surface of the intestine and its contents; but the variations from them are numerous.

When we remove the contents of the intestines in a nascent or new-born infant, we find a layer of thick mucosity adhering to the internal surface of the canal, and which on account of its thickness and consistence forms a kind of covering over the mucous membrane. When this covering is raised with the nail, it appears to an inattentive observer to be the mucous membrane. This layer is often expelled by purgatives when administered to new-born infants, and some practitioners have termed it a *saburra*. It is this substance that is expelled in flakes,

and mixed with the alvine motions of some new-born infants. The bile sometimes colours it in the duodenum, and when we remove it, we observe the mucous membrane in a healthy state beneath it.

The meconium tinges the internal surface of the intestinal tube to a greater or less extent, of a green colour; and it often happens that this substance, when expelled, is mixed with the mucosity just described.

When the meconium is liquid it is rapidly expelled in most cases, and the surface of the colon presents irregular patches of a green and white colour. These may be removed with the back of a scalpel, and then the mucous membrane will be found of its natural whitish colour.

As soon as the new-born infant receives food, the intestinal contents are varied in colour, and the phenomena of digestion are those of the after periods of life.

There is great importance attached to the evacuation of the meconium by nurses, and they exhibit various aperients to new-born infants for the purpose, which will be noticed when describing the medical management of new-born infants.

Malformations of the Intestinal Canal.—It has been found that a greater or less portion of the intestinal canal has been absent in acephalous fœtuses. In some cases there was only a portion of the small and large intestine; in others the large intestine alone remained. The intestinal tube is also liable to many other primitive malformations—to division, obliteration, dilatation, and contraction, in some part of its extent.

The division of the intestinal canal has been observed in different parts of its course, but particularly in the small intestine.

Scafer, of Wurzburg, has given a history of cases of this kind, which he divides into three classes:—1. The intestinal canal is contracted in many points; 2. It is divided in several parts by mucous membrane; 3. It is divided in many parts, and each is separated from the other*. M. Billard has related a case of intestinal division, and it appears, from all that has been written on the disease, that infants affected with it only survive a day or two. Nevertheless, they seem well developed externally, but do not pass meconium or urine; they sometimes vomit a brown fluid, and, after death, the intestine is found to have terminated in a cul-de-sac in one or many parts†. In other cases the small intestines were found adherent to each other, or to the gall-bladder; and the rectum may be imperforate, as I formerly stated. This last portion of the

* Journ. Complement. du Dict. des Sciences Med. t. xxiv.

† M. Billard relates some cases of this kind, which deserve perusal.—*Traite des Maladies Enfants*, &c., 1834.

intestine has opened into the bladder or vagina; but these malformations I have fully noticed already, when describing congenital malformations of the outlets of the body.

Congestions of the Intestinal Canal.—The intestinal tube may be congested in the nascent or new-born infant, in the same manner as the stomach, which has been already described. It may present three appearances, as in the former part: the ramiform, capilliform, and patches of larger or smaller size. M. Billard observed twenty-five cases of passive congestions of the intestinal canal in infants that died some hours or days after birth, and without hæmorrhage; in fifteen of which, all the external characters of apoplexy of new-born infants were apparent. The symptoms relative to the digestive tube were none or nearly none, and the lungs and heart were congested as well as the intestinal tube. These passive congestions often give rise to intestinal hæmorrhage; and this merits serious attention.

Intestinal Hæmorrhages.—A frequent result of intestinal congestion is hæmorrhage. In fifteen cases noticed by Billard, there were eight infants between one and six days old, four from six to eight, and three from ten to eighteen. Six of the infants were males and nine females. The greatest number were remarkable for general plethora, and congestion of the integuments; others were pale and feeble, as after severe hæmorrhage. In all, the great vessels of the liver, spleen, lungs, and heart, were considerably gorged with blood; in nine, the foramen ovale and ductus arteriosus were obliterated, or on the point of being so. In all, the brain and spinal marrow, with their coverings, were strongly injected; and in all there was more or less red and dark blood, in clots, in different parts of the intestinal convolutions.

Such are the vices of conformation and diseases of the intestinal canal, including the small and large intestines of infants born at the full time, and of those who died shortly after birth. At our next meeting I shall describe intestinal diseases, as they present themselves at or after birth.

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M. VIREY ON THE GENERATION OF ANIMALS AND PLANTS.

(Continued from page 768.)

Conditions necessary for Fecundation or Conception.—The intercourse of the two sexes is necessary for generation; and this is a law to which nature has subjected man and many animals. Nevertheless, there are examples on record which prove that an intimate union of the sexes is not necessary. A woman may become pregnant without immediate congress, by absorbing the seminal

fluid, applied to the orifice of the external genitals.

The slightest approach of the sexes, in which there is a seminal emission, may effect impregnation. All modern physiologists admit this doctrine, though, in former times, many German writers were ridiculed for this opinion. Plempius, Degraaf, Schurig, cited many examples of pregnancy which occurred in consequence of the application of the spermatic fluid to the genital orifice. Johnson published a work, entitled *Lucina sine Concubitu*, for the purpose of establishing the possibility of pregnancy without copulation. Averrhoes and Skenckius related cases of women who became pregnant on entering a bath in which the seminal fluid had been effused. Tarvernier states, that the Persian women sought the water of baths in which men had bathed, as an efficacious remedy for sterility. Fables still more extraordinary are recorded of women who were impregnated by the force of the imagination, by the winds, stars, and aerial spirits; and of these the present century afforded us an example, in another country, in Joanna Southcote. These fables are totally unworthy of belief.

It appears that, to render the act of reproduction as perfect as possible, it is necessary, independently of a good constitution, adult age, and the integrity of the genital organs, that man and woman should be determined upon it. If the whole mind is not absorbed by the act of sexual union, the offspring will be feeble and delicate, as we observe infants of those who make excessive mental or corporeal exertion. The sons of illustrious men are almost unworthy of their parents; while we observe, on the contrary, that most of those who become celebrated by character, genius, or valour, have been the fruit of an ardent love, and had parents distinguished for physical power. It is equally true, that great men are not the offspring of great minds, but of ardent love*.

General Causes of Fecundity and Sterility.—"It is necessary for a fruitful marriage, says M. Virey, "that there should be a certain harmony between the sexes, both moral and physical, and this is manifested in the sympathies of instinct, which, independently of beauty, makes us prefer one person to another. The sexes secretly wish their

* Sterne, though no great physiologist, has, in his first chapter, happily illustrated this point: "I wish either my father or my mother, or indeed both of them, as they were in duty both equally bound to it, had minded what they were about when they had begat me; had they duly considered what they were then doing, &c. I should have made a quite different figure in the world."

union by a natural impulse, which cannot be explained, and which, in a crowded society, renders us more attentive to one person than all the rest; and nature inspires us better in this respect than reason.

"This harmony consists less in similitude of temperamen, tage, &c. than in diversity; for if we remark, a violent bilious man prefers a mild and modest companion; whilst a passionate, impetuous woman, finds most charms in a moderate, tranquil man; so that one may be tempered by the other, whether they be too cold or too hot." It is well known that some married persons fail to have a family, who are fruitful after a second union.

When the characters are very different, they cannot enter in the state of harmony, as a frigid or ardent individual, until age or habit renders them more suited to each other: thus married persons have passed fifteen or twenty years without infants, notwithstanding their most anxious desires. Abraham and Sarah, and Jacob and Rachel, are examples mentioned in the Bible.

When there is antipathy, disgust, hatred, or passion, conception seldom happens; though some of these obstacles may exist at first, as in women who pretended to be forcibly violated, but who finally acquiesced in pleasure, and became pregnant; and it is not as yet determined whether impregnation can be effected when a real hatred exists. There are, however, many examples recorded of married and unmarried women who were impregnated when in a profound sleep, as mentioned in the books on Medical Jurisprudence, and recently by Dr. Gooch (*Outlines of Midwifery*, 1832), and Dr. Kennedy (*Elements of Obstetric Auscultation*, 1834). In such cases there could not be much voluptuousness, though amorous dreams might occupy the mind; but there was at the time no repugnance, for the former, or some degree of it, appears indispensable to the generation of a new being. It may be said with truth, that that which commences with hatred finishes with love, when the transport of pleasure ravishes the will.

Marc is of opinion that the moral causes of sterility in both sexes are, a fear to procreate, too vivid a desire to have children, an antipathy or incompatibility of humour between the sexes, negligence, apathy of husbands to their wives, the diseases and inconveniences of their wives, violent passions, and immorality or infidelity. He estimates the proportion of sterile to fecund women at 10 in 1000; Hedin, a Swedish minister, 1 in 10; Franck, at 6 or 7 in 3 or 400. The fear of procreation arises from the effects of indigence and inability to support offspring, or, in the upper ranks, from the vanity of women, who imagine that conception, and its consequences, will diminish or destroy their charms, or deprive them of devoting their time to those frivo-

lous pleasures which the rights of maternity demand. Reserve and frigidity, during the approach of the sexes, is a cause of sterility*.

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UNIVERSAL CODE OF GENERATION.

PART I.—GENERATION OF PLANTS.

FROM the preceding facts it is evident that plants are entitled to be classed among organic or living beings. The reproduction of living beings cannot take place unless by the co-operation of two orders, male and female, which compose each species. The word species means individuals which perfectly resemble each other, more or less, and are capable of themselves, by a reciprocal intercourse, to reproduce other beings with the same distinctive characters as their own; and this from one generation to the other. The species, according to Buffon, is an abstract and general term, nothing of which exists but in considering its nature in a succession of time, and in the constant destruction and reproduction of beings. It is that of comparing nature in the present with that of past times, and existing with defunct individuals, by which we have an idea of what we call species; and the comparison of the number and the resemblance of individuals is but an accessory idea, and often independent of the first; for the ass resembles the horse more than the spaniel the

* Fecundity is greater with some than with others. Haller knew families who had sixteen, twenty, twenty-eight, and thirty children. A friend of mine knew a lady of title, who is still fine and youthful looking, who had twenty-seven children. A patient of mine, at St. John's Hospital, had thirty-two; and a woman, aged seventy, appeared at the Police Office, Bow-street, in May last, who stated that she was the mother of forty children, and that her daughter had twins three or four times. The magistrate unphilosophically stopt her narration, as he thought he had heard enough of her fecundity.

M. De Stael asked Napoleon who was the greatest woman in France. He answered—"She who has had most children." Dr. Blundell seems to be of opinion, that fertility depends more on the female than the male sex. He mentions an example of two sisters, who bore three children each at a birth; and of a member of the profession who, in advanced life, namely, eighty years of age, had four children, which Dr. B. is disposed to attribute more to the fecundity of the wife than the husband. Hahneman, the father of homœopathy, near eighty, has just married a Parisian lady, aged thirty-six. These and other cases show the possibility of the truth of charges of violation against very old men.—ED.

hound, nevertheless these are of the same species, whilst these produce together individuals which can reproduce other beings, but the ass and the horse are different species, for they cannot produce but hybrid and infecund individuals.

We must not confound the species with the varieties or races, which only consist of accidental differences among individuals of the same species. Thus, the white and red rose, the simple or the double, &c. are only varieties of the same species; the English, Dutch, French, and Arabian horses are only varieties of the same species, and so are all the different dogs of the same race. In like manner, all men who people the earth do not form but one species, all are human beings, capable of engendering with others of whatever nations, and producing offspring with the moral and physical characters of the human race. Nevertheless, the human race, like vegetables and animals, offers a certain number of varieties, as the European, Caucassian, Mongolian, Hyperborean, American, and Negro.

The different species of living beings are composed of two classes, which are essentially different from each other by their physical organizations: and these are the male and the female sex. This distinction of individuals of the same species arises from the difference of structure, function, and secretion of the parts destined for reproduction: the female contains in her ovaries the elements of the new beings, while the male is destined to vivify these principles with a fecundating fluid called sperm—spermatic fluid, in animals, and pollen in vegetables—without the action of which the female will find it impossible to produce a new being. The organs subservient to generation are called the reproductive, sexual, or genital. Nature does not afford a single example of reproduction without this double organization, without an action more or less immediate of the sexual organs of the male on those of the female, or upon some production which escaped from the womb of the latter, as in the example of the frog, which does not impregnate the ova or eggs of the female until they are expelled from her body. We may, therefore, define generation a function by which certain principles emanate from a female individual which are fecundated by certain other fluids furnished by the male, which transform it into a new living being like those from which they take their origin; and these are capable in their turn of procreating other beings, similar to themselves.

But the processes which nature employs for the continuation and eternization of beings are very different in all individuals which compose the vast kingdom of animated nature. Notwithstanding their perfect analogy, there exists a difference in man, the other animals, and in vegetables.

Though I propose in this work but to no-

tice the generation of the human species, I cannot but introduce a brief description of the reproductive function in beings which nature has placed in a subordinate rank. This will enable me to proceed from the simple to the compound, and finally to conceive the complicated mechanism of this admirable and important function in man.

It has been already stated that there are male and female organs in animals, destined for reproduction, and there are similar organs in vegetables. With the exception of a very small number of plants, all vegetables offer on the same stalk both male and female organs of reproduction, an admirable provision of nature, which thus furnishes the means of generation to the plant compelled to develope, increase, and die in the sun, whilst animals have a muscular system, that enables them to move from place to place and search out each other. The flower is the part of the plant which contains the sexual organs. These are sometimes united, and the union is called hermaphrodite.

The flower, the most tender, beautiful, and remarkable, on account of its form and variegated colours, is generally composed of four principal parts, of which two are essential to generation—the stamen and the pistil; two others which exist for ornament and protection against external bodies—the calix and corolla. Such is the arrangement of all these parts in proceeding from the exterior to the interior.

The calix is that part which surrounds the flower, which varies in colour, consistence, and the number of pieces which compose it, all of which are united at the base. It may consist of one, two, or three pieces, and those are called phyllæ.

The corolla is placed within the calix, and forms the inner envelope of the stamen and pistil. Linnæus ingeniously compared this to the nuptial bed, or the theatre of the amour of plants. It varies in form and colour, and like the calix consists of one or more pieces.

The stamen, or the male sexual organ, is the third part of a flower, which proceeds immediately from the corolla, and its use is to fecundate the pistil or female organ, which is placed in the centre of the flower. This organ is composed of the filet and anther. The filet is not always present, as it is not indispensable to fecundation, as on its summit is the anther, without which fecundation cannot happen.

The anther consists of a fine membranous sac in a double cavity, in the interior of which is a very fine powder called pollen. The anther is compared to the glans or head of the male organ, and the filet to the body of the same organ. The pollen consists of very fine grains, in the centre of which there is a subtle fluid possessing a similar odour to the semen of the male: it is that of fecundation, by its action on the pistil.

Most flowers have several stamens, and

fewer pistils, so that we may fairly conclude that plants are generally polyandrous, that is to say, there are many husbands for one female, as among certain animals, and the human species in certain eastern nations.

Linnæus based his beautiful classification of plants on the number of stamens, or vegetable husbands. Thus his first class is monandria, one stamen—his second diandria, two stamens—and so on to the eleventh class, dodecandria, from eleven to nineteen stamens; the twelfth, icosandria, from twenty to a hundred stamens; the thirteenth, polyandri, from twenty to a hundred stamens, inserted at the tube of the calix, which is often united with the ovary; the fourteenth class, didynamia (two powers), four stamens, two of which are longer than the others; the fifteenth class, tetradynamia (four powers), six stamens, four of which surpass the other two in size.

The stamens, or male organs, may unite in different bundles; which led the illustrious Swede to add four other classes. Sixteenth, monodelphia, one further, when all the stamens are united into one. Seventeenth class, diadelphia, two brothers; eighteenth class, polyadelphia, many brothers; nineteenth class, syngenesia, simultaneous generation, when many stamens are united by the anthers, and not by the file, so as to form a tube which is traversed freely by the style of the pistil. The twentieth class, gynandria, which signifies woman and man, the male and the female, in which the stamens are attached to the pistils.

In fine, there are plants in which the sexual organs are not in the same flower, and these are divided into three classes. Twenty-first class, monoecia, one house or family; twenty-second, dioecia, two families; twenty-third class, polygamia, hermaphrodites, in which the male and female organs are united or unisexual. Lastly, there is the twenty-fourth class, in which the sexual organs escape detection with the eye, and these are called cryptogamia, hidden marriages. The female organs of plants are the following: the pistil is the centre of the flower, and is the female organ; it is composed of the ovary, the style, and the stigma. The ovary, derived from the word ovum or egg, because this contains small grains, germs, ovules, or rudiments, is the inferior part of the pistil, which is supported by the receptacle or base of the calix. When incised or cut across, it contains ovules or eggs. The stigma is the superior part of the pistil, which transmits to the ovary the pollen or fecundating powder shed on the surface of the stamens.

The style, which does not always exist in all plants, is a thread-like process situated between the ovary and stigma, whose use is to transmit to the first the fecundating powder—though the stamens or male organs are much more numerous than the pistils or female organs: but in some plants the latter

exceed the former in number. The number of pistils has served Linnæus for a division of a certain number of these classes into orders.

First order—monogynia—one pistil. Second order—digynia. Third order—trigynia. Fourth order—tetragynia—four pistils.

Functions of a Flower, or Amours of Plants.—Having succinctly described the reproductive organs of plants, let us now direct our attention to the mechanism of these functions, which have for their object the reproduction of the species.

The celebrated Linnæus first gave the physiology of the reproduction of plants. The flower forms the theatre of their amours: the calix is considered the nuptial bed; the corolla the curtains; the anthers are the testicles; the pollen the fecundating fluid; the stigma of the pistil the external genital aperture; the style the vagina, or the conductor of the prolific seed; the ovary the womb; the reciprocal action of the stamen on the pistil, the copulation or consummation of the sexual intercourse.

It is only at the period of floration, or the development of the flower, that the marvellous unions or marriages of flowers are celebrated. The sexual organs of male and female exhale a spermatic odour, while they become more irritable, and even acquire a degree of action visible to the naked eye. Then the functions of generation commence, and are six in number. 1. Sexual approach; 2. Dehiscence or ejaculation; 3. Absorption of the prolific fluid by the female; 4. Fecundation; 5. Gestation; and 6. Dissemination or expulsion of the fruit from the ovary.

I. Sexual approach, Copulation—Coition.—When the flower is developed and perfected, the sexual organs act on each other; the male organ (anther) directs its head towards the stigma (genital fissure), so as to shed on its surface the pollen or prolific fluid. In some hermaphrodite flowers which have ten stamens, as the fraxinella, ruta, &c. each approaches the female organ, and having shed its seed, resumes its original position, to give way to the nine others, which alternately perform the same function. In some flowers the corolla contracts, so as to bring the stamens nearer the pistils, and in aquatic plants the flowers elevate themselves above the surface of the water, copulation is effected, and then they plunge again into the water and develope in that fluid. Linnæus observed, that when the stamens were longer than the pistils the flowers were vertical, when the pistils were longer than the stamens the flowers were inverted, when both were equal the flowers were pendent. In this manner sexual approach was facilitated, and insemination effected in all hermaphrodite flowers.

II. Dehiscence or Ejaculation.—The pollen of plants contains the fecundating powder, and consists of a number of small sacs, invisible to the naked eye, in which a fluid

exists, which is analogous to the spermatie liquor in man and animals. The rupture of these sacs, to allow the escape of the pollen, is termed dehiscence, and is similar to the emission of seed in man and animals.

The surface of the stigma (genital fissure in animals) presents a number of apertures, communicating with the ovary, or directly, or by the filiform (thread-like) process called style, and which we call the vagina in woman and other animals. The ovary of plants, like the uterus in animals, possesses a power of absorption or suction of the fluid, which it communicates to the ovule or germ. It is this action by which the ovary draws to itself either the seed, or the vapour arising from it, *aura seminalis*, and which action is termed pollinic absorption in plants and impregnation in animals.

The history of human generation informs us that the womb absorbs or sucks in with avidity the male fluid, and that impregnation follows the slightest penetration of the virile member.

The stigmata of flowers, like the organs of most women and animals, in the season of amours, are bedewed with more or less humidity, acquire more heat, and even become odorous. This organ in the sensitive plant, tulip, &c. becomes congested and contractile, not only after the application of the fecundating powder, but when submitted to any kind of stimulation. The arum of Italy develops so much heat under the same circumstances, as to be appreciable by the thermometer. We see the female organ in the crown imperial, the board of St. Anthony, &c. depress itself towards the male organ, which it surpasses in length. We even observe tremblings in the *parnassus de marais*, when it receives the exciting impression of the fecundating fluid. Eranté has beautifully described these phenomena in his delightful work—*De Connubiis Florum**.

III. *Fecundation, Impregnation of the Germ, Conception.*—The seminal fluid of the pollen having been transplanted to the ovules or germs in the ovary, these rudiments acquire a new mode of vitality; they rapidly increase, and are transformed into real grains, which are capable of giving birth to a new vegetable being, whilst they are placed in a situation the most favourable for germination. Such is fecundation in plants; and it does not differ from what we term conception in women and other female animals.

When fecundation is effected, both male and female organs, except the ovary, decay and die, as nature has accomplished her object and left the elements of future generations for development. These organs can

no longer contribute to the perpetual renovation of the species. "Reproduction," says Merat, "is the end of all the cares of nature, for which she has prepared the most brilliant apparatus. The act being finished, all enter into repose, all fade, all vanish. Retard fecundation, impede it by any means, and the flower preserves the freshness of its calix for a long time."

IV. *Development of the Ovules, Gestation, Pregnancy.*—The ovule remains a certain period, as in animals, until it develops and is transformed into grains capable of giving birth to new individual vegetables. We shall see, in studying the fruit, the processes employed by nature to effect this object.

V. *Dissemination, Dehiscence, Parturition.*—These terms are synonymous, and mean the escape of the grain from the fruit, and are analogous to parturition in women or animals.

a. *Analysis of the Fruit.*—The fruit is nothing else but the ovary arrived at perfect maturity. It is composed of two principal parts—the pericarp and the grain.

The pericarp is that part of the fruit which contains the grains. It is composed of three other parts. 1. The epicarpe or external membrane, which covers the fruit externally; 2. The sarcocarpe or pulpy part of the fruit, which is situated immediately under the epicarpe; 3. The endocarpe is the membrane which lines the internal cavity of the fruit, and which is in direct contact with the grains. It is easy to understand this description by examining an apple.

There is also a communication between the seed and the pericarpe, in some instances, which is termed trophosperma. We see this in the pod of a garden pea. The seed is covered by a membrane, named episperme. There is also a small prolongation from the trophosperme to the grain; which is termed podosperme, which means the foot or root of the seed, and it establishes a means of communication between the ovules and the pericarpe. It is through this prolongation that the ovules receive the nourishment necessary for their transformation into grains, like the umbilical cord in women and animals. The small cicatrix on the grain is called umbilicus, as in man, and it results from the podosperme or umbilical cord with this part of the fruit. The examination of a pea affords a perfect idea of all these parts.

Means which Nature employs to disseminate Plants on the Surface of the Globe, and to prevent the Extinction of the Species.—The chief of these means is dehiscence (parturition of a plant), which consists in the rupture of the pericarpe to allow the escape of the seeds. This operation, as in animals, does not take place until the germs have acquired all their maturity. Then the grains endeavour to escape, rupture the connexions which retain them in the pericarpe, and escape on the surface of the earth to produce new beings, as without this all vegetables would disappear on the surface of the

* ————— *Dat pronubia signum*
Aurora exoriens; fila obriguere; dehiscunt
Folliculi; volat aura ferax tectoque reflexa
Præcipitat perque antra tubæ perque antra
placentæ;
Ova tument, guadet flos femina prole futura.

globe. Nature employs a number of means for the propagation of plants in the different parts of the earth, and to prevent the extinction of the species: as the mode of dehiscence of certain fruits, the promptitude of germination in a great number of grains, the power which others possess of remaining incorruptible for a great length of time, the winds and the waters, which transmit them to a great distance, the animals which swallow them entire, and lastly, their great fecundity. A few illustrations may be given of each of these causes, as all of them afford peculiarities which are extremely curious to those desirous of examining and observing the propagation of vegetables.

b.—Dehiscence or Dissemination.—There are some fruits whose pericarpe, at the period of maturity, opens with such rapidity, that the grains are projected with an elastic force to a very considerable distance, and sometimes with a great noise. We observe this in the willow, the fraxinella, &c.

Promptitude of Germination.—There is a vast number of plants which germinate with astonishing rapidity, some even in the short period of three days.

c. Incorruptibility.—Most grains, except the oleagenous, remain incorruptible for a long time; some have remained forty, fifty, a hundred, and even a thousand years. Some have been found between the bandages of Egyptian mummies, which retained their power of germination. Mr. Houlton mentioned a fact of this kind in his lectures on botany, delivered before the Medicobotanical Society of London.

Winds and Waters.—A vast number of grains are so light that they may be transported to great distances by the winds. Others float in the air, and, according to some botanists, have been transmitted from one country to another, and even from one continent to another. Thus it is said that the erigeron of Canada was transported by the winds from North America to Europe. In the same manner it is stated that rivers, torrents, the waters of the ocean, transport seeds to a great distance, from one island to another, and from one continent to another. The corva of the Maldivé islands is said to be conveyed by the ocean to the Sechelles. The coasts of Norway present fruits which were transported by the same means from America.

d. Animals.—Man and animals contribute very much to the emigration of plants. They swallow many seeds without masticating them, and deposit them with their excrements in various situations, where they germinate. Many other seeds are also conveyed in the exterior of animals, as in their hair.

e. The great Fecundity of Plants.—The fecundity of plants in general, and many in particular, is really astonishing, and explains the facility of their reproduction, and their rapid multiplication. Thus, to cite a few

examples, a single poppy seed produces 30,000 grains, and a tobacco seed 40,000. Many other examples will be found in the account of fecundity.

VI. Amours of Plants in which the Male and Female Organs are not united in the same Flower.—There are certain plants in twenty-first, second, and twenty-third classes of Linnæus, whose flowers have male or female organs only. Monoic plants have sometimes the sexual organs placed at a greater or less distance on the same branch. Some, on the contrary, have the male flowers on one branch and female on another, as in all the dioic plants. The winds transport the pollen to the female organs, and bees, butterflies, and other winged insects, in flying from flower to flower.

Nature, ever wise in purpose, has placed male and female plants sufficiently near to each other that they may easily celebrate their amours by the wings of the wind.

Proofs of Sexes and Amours in Plants.—The theory of the reproduction of plants is far from being the fruit of the imagination, and it can only appear so to those who have never contemplated the brilliant spectacle of animated nature. It is proved by daily observation, which it is in every one's power to make. Multiplied experiments have proved that the rudiments of grain contained in the ovary cannot be developed but by the action of the fecundating pollen of the male on the female. The most illiterate floriculturist can attest this fact.

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Reviews.

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Lectures on Diseases of the Urinary Organs.

By Sir B. C. Brodie, Bart. V. P. R. S. &c.
Second Edition. 8vo. pp. 329. Longman and Co.

The Anatomy and Diseases of the Neck of the Bladder and of the Urethra, being the substance of the Lectures delivered in the Theatre of the Royal College of Surgeons, and in the Westminster Hospital. By G. J. Guthrie, F.R.S. &c. 8vo. pp. 284. Burgess and Hill.

THE authors of the productions whose titles are at the head of these remarks, hold the first rank as operative surgeons, and justly enjoy a very high character wherever surgery is cultivated.

Both have contributed important original works to the republic of medical literature. They now appear before the medical world as illustrators of a most important class of diseases—those of the genito-urinary organs. It is however to be regretted that they have

treated the subject too superficially and imperfectly ; and have added very little to what is already known. The profession had reason to expect much more from two of our hospital surgeons, who are also most extensively engaged in private practice. Nevertheless, they have scarcely advanced a single practical suggestion that has not been already made by their contemporaries in foreign countries ; and moreover, they have neglected to state many improvements suggested by our continental neighbours. Truth and justice compel us to offer this remark ; and it is confirmed by the recent strictures of foreign surgeons. Some of our impartial contemporaries can see nothing but super-excellence in English surgery—that of every other nation is bad compared with it ; in fact, “ nothing good can come from Nazereth.” Such sentiments will be palatable to those influenced by national prejudice, who are unacquainted with the actual state of science abroad, and very partially acquainted with that at home. Flattery is a delicious essence, and is generally swallowed with avidity, no matter how freely applied.

But observation in different countries has however thoroughly convinced ourselves, that there are able and great physicians and surgeons abroad as well as at home, and that talent is not confined to any. We are led to make these remarks after our comparison of the works before us with those of other nations, and after a full conviction, from an impartial examination, that our countrymen, so far from excelling, are not even equal to some foreign authors who have described the same class of diseases. Some of our slippery and toad-eating contemporaries have to their honour lately abused by wholesale all foreign surgery, though they generally contrive to fill a large portion of their own pages with the said inferior article. Thus stand their principles and practice. Now, if foreign medicine and surgery be so very inferior to British, why are the pages of our periodicals literally crammed with it ? We leave our opponents to answer this question. We shall not even allude at present to the motives which have led to such unjust and unmerited censure of foreign medicine, though we deeply regret that such a blot should stain the pages of British medicine.

While we honestly admit the improvements made by our foreign contemporaries, we also

maintain and uphold those of our own countrymen ; though every one acquainted with the actual state of science at home and abroad must acknowledge if he speak the truth, that the profession in this country, as a body, has not kept pace with the progress of science. Thus, neither of the eminent authors of the works before us have spoken of lithotrity as it merits, nor neither has formed a just estimate of Arnott's and Ducamp's plan of cauterization of strictures. Again, on perusing the work of Sir B. Brodie, one would suppose that he and his predecessors at St. George's Hospital were the only individuals in the world who had treated of urinary diseases. He scarcely mentions the name of a foreign writer, nor even of his metropolitan contemporaries, so that his readers must be satisfied with his own opinions. This is a charge that may be as justly made against most of our hospital physicians and surgeons ; in fact they endeavour to make students believe that there is no such hospital on the face of the globe as that to which they belong ; whether St. Bartholomew's, Guy's, St. George's, the Middlesex, the Westminster, the London, or North London. Every one of these is an hospital of wonders, and so are the Dublin and Edinburgh. This hospital puffing is carried to a most disgusting extent, but the present students very properly appreciate it. This puffing of “ shop ” must cease, for students and practitioners are now too enlightened to imagine that the scientific treatment of disease is superior in any particular institution. We are borne out in this statement by referring to the practice recommended by both writers whose works have given rise to our criticism. Sir B. Brodie states in his first sentence, “ It is my intention to communicate to you the results of my experience as to the diseases of the urinary organs, and the treatment which is required for their relief.” The author confines himself to his own experience, which is extensive, but he nearly omits all allusion to that of others, both national and foreign. Now we must contend that no public lecturer, however eminent, can discharge the important duty of teaching, without referring to the labours of his predecessors and contemporaries ; and he who does so, falls far short in communicating the necessary information. It is of course very instructive to students to hear the experience

of a lecturer, but they want something more—they want a full account of all that is known on the subject.

But when a teacher publishes his lectures, they come before the whole profession, who have a right to expect the fullest information. Now here our author has fairly disappointed them. His account of the pathology of stricture is meagre, and wholly unworthy of an individual of his acquirements and eminence. Here it is:—

“Strictures of the male Urethra.—A mechanical obstruction to the flow of urine through the male urethra may arise in various ways. There may be an enlargement of the prostate gland, by which one extremity of the urethra is surrounded; an abscess in the perinæum, or one of the mucous follicles, may be inflamed, and converted into a solid tumour; and any one of these, as well as some other causes, may operate so as to produce the effect which I have mentioned.

“The most common cause of difficult micturition is, however, a contraction or stricture of the urethra itself, and this disease requires our first consideration.”

Now, surely no student could form a just idea of the origin and cause of strictures from this description; he could not refer to urethritis as a cause, as he does not find gonorrhœa mentioned, nor is he informed of the commencement, progress, different forms and situations of strictures. These are serious omissions; and can only be accounted for by supposing that the author thought it enough to detail the results of his own experience. He introduces some ordinary cases of retention of urine from stricture, and describes his own methods of treatment, in which we find nothing novel. Interspersed among the histories of the cases are remarks on the form and pathology of stricture, which ought to have followed each other in regular order.

The symptoms are tolerably well described, but by no means so minutely as they might have been; and then follows an account of retention of urine, rupture of the bladder and urethra, infiltration of urine, sloughing, &c., abscess of the prostate gland, inflammation of the bladder and surrounding parts, and lastly, disease of the kidneys.

The next subject treated of is, the diagnosis of stricture of the urethra. This point is very accurately elucidated. Then comes the retention of urine from stricture.

In the cure of stricture Sir B. prefers a

gum elastic catheter with a stilet, to a metallic one, so strongly recommended by Sir Astley Cooper. He observes, “I should premise that the disease is not to be cured by medicine.” It would therefore appear, that cures effected with iodine in Germany are not believed by Sir Benjamin, nor does he once even allude to them. He expatiates on the advantages of the different kinds of bougies, and does not recommend the flexible metallic ones. He prefers a gum elastic catheter with a strong iron stilet, which is to be worn in the bladder for three or four days if possible, then withdrawn, and replaced by a much larger one. The patient should remain in bed or on a sofa; and we are further informed that a cure may be effected in the course of ten days, of a very contracted stricture. We have however repeatedly met with cases which did not yield so speedily.

Our author thinks the dilator of Mr. Arnott, made of varnished silk and filled with air by a syringe, as well as the steel one, unnecessary, whenever a bougie can be passed. He tells us that he rarely uses a caustic bougie with nitrate of silver; and he describes the objectionable and dangerous caustic bougie of Sir E. Home, while he is silent on the improvements of Arnott and Ducamp. We scarcely think it possible that Sir B. Brodie has not seen Ducamp’s instrument, and if he has, why pass it over in silence? It enables the surgeon to apply a caustic to the stricture only, and does not cauterise the whole urethra, like the barbarous armed bougie of British surgeons. We should be sorry to learn that our author has not seen this unobjectionable instrument, and we regret that he has not mentioned it or employed it. We hope he will do so before he publishes another edition, and never again talk of the dangerous caustic bougie of his patron and friend Sir E. Home.

Our author next notices diseases of the bladder and prostate gland, urinary and renal calculi, and lithotomy. We have already stated that he is silent on lithotrity. The reader, however, will be amply repaid for the perusal of these articles.

In conclusion we have to observe, that this work, though abounding with many instructive cases, is a most imperfect treatise on the diseases of the urinary organs, and far inferior to Chopart’s, by Sabatier, to Ducamp’s,

Appassat's, Phillips', and many others on diseases of the urethra.

It is a familiar treatise, which may be perused by the general as well as the medical reader. In delivering our opinion, we are actuated by a love of truth and science. We are no fawners on hospital physicians and surgeons: they shall hear our real and honest opinion of their productions. If they feel annoyed we cannot help it; but their toadies and hangers on will always apply a proper quantity of the delicious essence called flattery, which will soothe the irritation we have excited.

The second work at the head of these remarks need scarcely be noticed by us, as its contents have already appeared in this Journal. The author confines himself to the anatomy and diseases of the neck of the bladder and urethra, and these he has ably elucidated. He entertains some new opinions on the structure and diseases of the parts of which he treats, among which he contends that diseases of the middle lobe of the prostate gland is of rare occurrence, and generally supposed to exist when the real disease is in the neck of the bladder. He condemns the universal proscription of caustic, and hopes that the instrument of Lallemand, which is an improvement of Ducamp's, may finally be used in this country. His description of it is not however so clear as it might be, but those who wish to inspect it, will find an excellent delineation of it in Mr. Phillips' Treatise on the Urethra and its Diseases, especially stricture. This is a work which every surgeon ought to have in his possession. We are bound to state that there is a vast deal of practical information in Mr. Guthrie's work, which deserves careful study. The work is entitled to a place in every surgical library. In fine, we cannot but observe that the prejudices in this country against caustic bougies arise from their dangerous effects on the urethra, by burning most unnecessarily the whole of the canal, exciting spasm, and profuse hæmorrhage. These evils cannot happen from Ducamp's instrument. The caustic is concealed in a tube, and touches only the stricture. It effects a cure after three or four applications, and is now generally employed on the continent of Europe. It is highly lauded by the French, German, and Italian surgeons, and is very much employed by Mr.

Costello, Mr. Benjamin Phillips, and other British practitioners. We have also used it ourselves, and consider it a great improvement. It is infinitely safer than the caustic or armed bougie of this country.

In concluding our notice of the works before us, we have to observe, that both are instructive on the subjects of which they respectively treat; but these are only a portion of the diseases of the genito-urinary organs; and therefore we object to either as treatises—indeed the latter is not offered as such. We still want a complete Treatise on the Diseases of the Genito-Urinary Organs.

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An Essay on the Nature of Diseases. By A. Green, LL.B. 12mo. pp. 52. London: 1835. Simpkin, Marshall, and Co.

ON perusing the title of this tract we were startled, wiped our spectacles, and read it again, when, to our amazement, we saw that the author had attempted to explain the nature of all diseases in a brochure, which one could carry in his waistcoat pocket. Pathology reduced to fifty 12mo pages! quoth we; well, this author must be a remarkably clever individual to write, *de omnibus rebus medicis, et quibusdam aliis* in such narrow limits. The shadows of the ponderous tomes of Andral, Hope, Craigie, and others passed before our mental view; and we could not help exclaiming, what labour have the authors of these volumes undertaken unnecessarily! Here is Dr. Green, LL.B., who has cut the gordian knot, and reduced pathology into a nut-shell.

Astonished at this unequalled and extraordinary achievement, we naturally hastened to peruse the pathological *multum in parvo*; but we found it in the state of the mountains of old—

Parturiunt montes, et nascitur ridiculus mus.

The progeny of Dr. Green is of kindred with that of the mountains; he has given birth to the hypothesis, that all diseases are caused by animalcules. He has not, however, offered the slightest proof in support of this opinion, and all his notions are based on mere assertions.

A great deal of indulgence ought to be shewn to a doctor of civil law, when he chooses to dabble in physic; and as we

abound with the milk of human kindness, we treat our author with our wonted urbanity. We do not nor cannot agree with him; but we award him credit for incubating such an offspring, and such an unintelligible hypothesis of the nature of all diseases.

As we progressed in his discoveries, we often imagined that the mantle of St. John Long, or Hahneman, or Ramadge, or Eady, or Goss and Co., had descended on his shoulders: but we discovered that he was not interested in curing consumption, or cancer, or syphilis, though he considered all of these and every other disease caused by animalcules. There was nothing of the no-cure no-pay system professed by him—he did not proclaim cancer or consumption curable, and fill his pockets under false pretences; neither did he profess to cure a parish or a city with the hundred thousandth part of a grain of bread crumb or magnesia, nor does he profess to cure incurable diseases. No! he does not belong to the genus: knaves and humbugs, the species of which acquire ill-gotten wealth by imposing on a credulous public, by professing to cure incurable diseases, or by basely imposing on the weakness of human nature, when overwhelmed with dangerous or fatal disease.

Dr. Green is evidently a man of principle; he is no miraculous curer. The notions, however, of our author, are second-hand, as Linnaeus and others have anticipated him. The proposition, that animalcules are the causes of all diseases is not new, neither is it true. Thus to imagine that animalcules are the cause of all continued and intermittent fevers, all contagious diseases, syphilis, plague, hydrophobia, small-pox, measles, hooping-cough, scarlatina, scurvy, iritis, calculus or stone in the bladder, ossification of the arteries, scirrhosity (qy. scirrhus) of glands, mesenteric disease, white swelling of the knee joint, gout, rheumatism, nervous diseases, cancer, caries of the teeth, &c. &c.; appears to us not only untenable, but perfect nonsense.

The author talks of curing consumption by inducing inflammation of the lungs, a method also praised by Dr. Ramadge in his "Consumption Curable." Ordinary practitioners are so stupid as to suppose, that inflammation of the lungs exasperates con-

sumption and accelerates death. This is the general, almost the universal opinion of the profession in all countries, but no doubt they are mistaken, as such eminent men as Green and Ramadge defend the opposite plan of treatment.

Dr. Green has, however, accumulated many assertions in support of his hypothesis. "*De gustibus nihil disputandum*," or as Sterne has translated it, there is no disputing about hobby horses; and we agree with Shandy, that our author has a right to ride his as he pleases. This little work will interest almost every general reader.

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MANUAL OF OPERATIVE MEDICINE, BY M. MALGAIGNE.

FREELY TRANSLATED AND CONDENSED

BY GREVILLE JONES, Esq.

Lecturer on Anatomy and Physiology.

CHAPTER III.—OF THE LIGATURE OF MASSES,

KNOWN to the ancients for the removal of peduncular tumours, and in the operation for certain fistulæ; perfected and varied by Levret, advised by Arabetz for amputation, treated as a means of more general application by Mayor. This operation consists in constricting parts, either to divide them slowly, or to suspend the circulation and procure their separation by gangrene. The nature of the ligature has varied—silk, thread, pack-thread, or metallic thread, either of lead or silver; all these substances may be useful. The essential point is that the ligature should be smooth and strong. If it be of silk or thread, it should be rubbed with soap, to make it glide more easily.

There are three general rules with regard to the application of the ligature, which refer however only to those unions which are exposed to view. Such as are situated in deep cavities require especial methods, which we shall describe hereafter. The rules in question are—1, to choose a ligature sufficiently strong for the parts it is intended to embrace; 2, to embrace only a moderate thickness of tissue; 3, not to comprise the skin in the ligature. This should be cut and dissected away first, except when the peduncle is very narrow, or the skin ulcerated or diseased. We may tie also, without previous section, tumours of the mouth, fungi, polypi, &c.

When there is only a moderate thickness of the tissues to be divided, it may be surrounded with a ligature, and tied in any manner that may be judged expedient. When a conical tumour with a broad base is to be tied, and the thread slips towards the apex, it may be retained on the base either with

the fingers or by implanting in the bone the hooks of a pair of tenaculum-forceps*, until the stricture is effected.

When the peduncle is too large, a needle should be passed across it, armed with a double thread. The two portions of the thread are to be separated, and each peduncle tied separately.

When the base is extremely large, it may be requisite to tie it in several portions. For this purpose two large curved blunt-pointed needles may be threaded with the same thread passed through the tumour at separate points. Then the ends may be cut, turned round the tumour, and tied, or the same manœuvre may be effected by one needle only; it is requisite that after the needle has traversed the tumour from right to left, it should re-traverse it from left to right. The passage of the needles requires some caution. We should proceed slowly, guiding the needle at its entrance with the right forefinger, and assist its exit with the left forefinger. If the base touches on important organs, instead of passing the needles beneath the tumour they should traverse its substance. They should always be inserted on the most dangerous side, and brought out on the side where there is less to fear. With these precautions the vessels roll before the blunt point of the needles, and are very seldom wounded. If at any time hæmorrhage supervenes, the needle may be left in the wound as a plug, and a strong ligature applied behind it, and the tumour which gives rise to the bleeding strangulated.

The stricture effected by a ligature may be *definitive* or *progressive*. In the first we make with the two ends of a ligature, the first part of a knot, as tight as possible. An assistant secures this with the finger, while we add a second tie. After some days the incipient division of the tissues renders the ligature relaxed, and it becomes necessary to renew it twice, thrice, or four times. This procedure applies only to very small tumours†.

In the progressive stricture the surgeon is master of the ligature, to relax or tighten without changing it. It is effected by different modes of procedure, which vary only in respect to the instruments employed.

In one method the first tie is made with a bow, so that it may be tightened at will—the degree of stricture being represented by the force exerted by the surgeon's hands. The knot-tyers (*serre nœuds*) of Levret, Desault, &c. belong to this method, since they have no other use except to permit the ligature to be tied far from the handle, when that is placed in a deep situation. In a se-

cond method a *metallic* ligature is used. The ends are twisted to the requisite degree, and the torsion increased at intervals of a few days.

The third method is the *knot-tyer of Graefe*, imitated from the tourniquet of Petit. This is a steel rod perforated at its extremity by a hole, through which are passed the two halves of the noose previously applied. At the other extremity is a screw, which, when turned, moves a moveable nut, to which the ends of the ligature are firmly attached; a simple turn of the screw is sufficient to diminish or increase the stricture.

A fourth procedure is by the *knot-tyer of Roderic, modified by Mayor*. The *serre nœud* of Roderic is composed of small balls of wood, bone, horn, or ivory, two or three lines in diameter, traversed by a central canal. A greater or less number of them are added across their canal, the two ends of the ligature are passed so that they become strung like a necklace, and represent a moveable tube. The last is pierced with two holes, in order that when the ligature has cut into the constricted parts, it may not permit the little balls to escape; and the last has a similar disposition, in order that the knot of the ligature may be tied on the interval between the two holes.

M. Mayor complains that this tube is too flexible, and subject to turn and twist in every direction, when forcible constriction is applied. He therefore only employs the little balls for half the extent of the *serre nœud*, and he completes it by a metallic tube. To the end of this a small axle is fixed, which is imitated from the tourniquet of Percy. The two arms of the ligature are attached to this axle; and it may be conceived how, by giving this one or more turns, the constriction may be carried as far as necessary. Moreover, M. Mayor has rendered the extremity of the last ball almost a sharp edge, in order that it may play its part in cutting through the tissues.

Estimate of the value of these Methods.—If we wish to divide merely a lamina of skin, as in some fistulæ, the two first methods are preferable. If an energetic constriction be necessary, recourse may be had to the two others; but (without reference to the use of the balls, which may be had either way) the screw of Graefe appears to us easier to manage, simpler, and more powerful, than the tourniquet of Mayor.

The first effects of constriction are in general painful; afterwards the parts lose by degrees their sensibility with their life. If it is a part which we insulate entirely from the body in proportion as we tie the ligature, we see the part swell and acquire a livid tint. Other symptoms depend on the nature of the tissues. When the section is made slowly, the formation of the cicatrix commonly occupies a corresponding period. The following precautions are to be observed:—
1. To tie with precaution and slowness, ob-

* Pince à erigne.

† The incessant stricture adopted by Levret and Pelletan is mentioned, but with the confession that the instruments used cannot be depended upon.—T.

serving the effect upon the living parts, and also upon the ligature, which we must take care not to break. 2. If the tissue be soft, lax, and easily torn, complete strangulation must be avoided; too prompt a division may be followed by effusion of blood; the ligature should be tightened once or twice every day. 3. If the tissues be hard and difficult to penetrate, the first attempt at constriction should be carried as far as possible without breaking the ligature, and our efforts should be repeated twice a day. 4. If local inflammation, or uneasy nervous symptoms, come on, it is better not to increase the constriction, but even to relax it somewhat, until such accidents have ceased. 5. If at any time those accidents should be so alarming as to demand the prompt removal of the ligature, or even of the diseased part, instead of relaxing the thread, it is better to tighten it extremely, and excise the tumour on this side of it with a cutting instrument. Then we may tie with ease all the divided arteries, increasing or relaxing by turns the compression, in the same way as we would use a tourniquet in amputation of the limbs.

CHAPTER IV.—METHODS APPROPRIATED TO HINDERING THE EFFUSION OF BLOOD; OR, SURGICAL HEMOSTATICS.

Hæmorrhages are the most formidable accidents which are complicated with or follow operations. It is then of importance to know how to prevent them before operating, how to suspend them while operations are going on, and how to repress them definitively afterwards.

SECT. I. Methods employed previous to operating.—There are two methods of preventing hæmorrhage—compression of the arterial trunks, or their previous ligature. But the latter is a very complicated operation, and will be treated of hereafter.

Compression has for its object to flatten the artery, and thus, for the moment, efface its calibre. Hence, in order that compression should be exact, the necessity for these conditions: 1. that the artery should not be too deeply seated; 2. that it should rest upon a solid bony surface. When these conditions are absent, the whole limb must be compressed.

1. There are six modes of compression in general:—

1. *With the Fingers.*—We first find the artery, which is recognised by its pulsations, and choose the point at which we will compress it, and then apply the thumb or fingers on the vessel, observing the following rules:—1. The pressure ought to be made in a direction perpendicular to the osseous plane on which the artery rests. 2. If the thumb be made use of, it is to be applied across the vessel, and pressed downwards, as in using a seal. If the other fingers be made use of, an horizontal plane is formed by the union of their soft extremities. They are ar-

ranged along the course of the artery, so that the pressure is made by the four fingers together, while the thumb, placed on the opposite side of the limb, or on some salient point, furnishes a point d'appui. 3. The pressure ought to be as light as possible, sufficient only to efface the calibre of the artery—a very important rule, which cannot be broken without fatiguing oneself horribly, and even exposing oneself to relax the pressure; the fingers benumbed, and, as it were, paralyzed, no longer feeling the position nor the size of the artery. 4. The assistant who makes the compression ought to be placed so that he can see the operation without inconvenience to the operator, and without being inconvenienced himself. 5. If the fingers become tired during a long operation, the corresponding fingers of the other hand may be placed above them. If that does not suffice, a second assistant may press on the fingers of the first, or even may take his place, by compressing the vessel immediately above his fingers. 6. If, in consequence of any movement of the fingers, or of the patient, the obliteration of the vessel ceases, it is requisite promptly and firmly, instead of increasing the effort of compression, to re-establish it upon the axis of the vessel, and perpendicularly to the osseous plane, as before. 7. Compression ought to be continued until the application of definitive hæmostatic methods has taken place. If, at any time, the operator requires a jet of blood, to enable him to recognise the mouths of the vessels, the assistant has only to raise lightly the fingers, without quitting the artery, and re-apply them immediately.

2. *Pressure with a Pad.*—A pad, or merely a bandage rolled tightly, is placed upon the course of the vessel, and the fingers are pressed upon it. This has all the inconveniences of the former method of procedure, with the additional disadvantage of employing an instrument which does not feel the artery.

The pad, mounted on a handle, and applied as a seal, saves any fatigue; but it is liable to become displaced, and is calculated only for the subclavian artery, or perhaps the abdominal aorta.

3. *Pressure with the Garrot.*—This instrument is composed of a pad, a band, a plate of horn or tortoiseshell, and a small stick of horn or wood, furnished with a string at one end of it. The pad is placed on the artery, the plate on the opposite side of the limb. They are retained in their situations by the band, which is passed twice round the limb, and then tied in a knot on the plate. The little stick is pushed as far as its middle between this knot and the plate, and by turning it round, the band may be twisted on itself, so as to cause constriction of the whole limb on the bone, especially where the pad is situated. An assistant may hold the stick in its place, or it may be retained there by

tying its string to the band. This is one of the best means of compression. Its use, however, is confined to the middle parts of the limbs, and it has been objected to on account of its causing injury to the skin and preventing the retraction of the muscles. We have employed it much in Poland without finding it produce contusion of the skin. But we have met with the following inconveniences. It is difficult to relax and renew the compression quickly, when we wish by a spurt of blood to detect the mouths of the arteries; and its pressure being general, is exerted on the veins, so that the return of blood is prevented, a venous hæmorrhage from the stump ensues, ceasing however, when the garrot is quite taken away.

4. *Pressure by the Tourniquet of Petit.*—This is formed of two square plates, somewhat arched, the upper of which may be raised or depressed, by a screw fixed to the lower one. Under the concave surface of the latter is placed a small cushion covered with chamois leather. A free pad and a band affixed to the plates complete the apparatus. The plates being in opposition, the cushion attached to the lower one is placed on the course of the artery, the free pad on the opposite side of the limb, which is surrounded by the band moderately tightened; then the screw is turned, which by removing the two plates presses the lower one against the artery, and thus establishes sure and efficacious compression. The compressing cushion ought to be large enough to render its application over the artery easy, and to hinder the instrument from rocking over to one side. *Dupuytren* employed a troublesome and expensive instrument, which consisted chiefly in the substitution of a steel plate, curved so as to form two thirds of a circle, and divided in the middle in such a way that its two halves rode on each other, for the band of *Petit's* tourniquet*.

5. *Pressure by the Ligature en masse.*—This has been before described.

II. We shall now point out the *special methods of compression* applicable to particular arteries. The anatomical details which are wanting in this place will be found in the article on the ligature of arteries.

1. *Arteries of the Neck, Face, or Cranium.*—*The common Carotid.*—Easily felt under the skin, chiefly at its upper part, and resting on an osseous plane, it may be compressed with the fingers acting perpendicularly to the horizon. But this pressure is painful, on account of the neighbourhood of the trachea and larynx, and is rarely had recourse to.

The External Maxillary.—The easiest artery

in the body to compress; it may be compressed with one finger upon the edge of the lower jaw-bone, in front of the insertion of the masseter muscle.

The Temporal Artery.—In front of the external ear, two lines from the front of the tragus, its perpendicular compression is very easy. All the other arteries of this region escape pressure, or are so small that it is useless. If a wound of the arteries of the skull should give rise to hæmorrhage, it would be much more rational to compress the wound itself, than the small arterial trunks, on account of their numerous anastomoses.

2. *Arteries of the Upper Extremity.*—*The Subclavian Artery.*—*Camper* proposed to compress this with the thumb on the first rib in the omo-clavicular hollow. But on account of the rising of the clavicle the thumb cannot penetrate sufficiently deep, and moreover, this compression would be very fatiguing. It is usual, therefore, to have recourse to a pad attached to a handle. But the security of the pressure here being subordinate to the movements of the clavicle and shoulder, is not to be depended on; and it is nearly given up. We believe, nevertheless, without trusting to it entirely, that it is useful to have recourse to it only as a supplementary means.

The Axillary Artery under the Clavicle.—*Dalh* proposed to compress this artery on the second or third rib. The fingers not being able to effect this, on account of the thickness of the muscles, he invented a particular tourniquet. This compression, difficult and uncertain, is justly abandoned*. *The same in the Axilla.* The artery is easily flattened against the head of the humerus. The pressure is made with the four fingers, either alone or furnished with a pad. It should be remembered that the artery is situated at the union of the anterior with the middle third of the axilla.

The Humeral Artery.—Immediately under the skin, and coasting the inner edge of the biceps, it may be compressed throughout its whole extent with the thumb and four fingers, or with any kind of tourniquet. Care must be taken to make the pressure in a perpendicular direction. *The Radial Artery* is easily compressed at the inferior third of the arm, between the radius and tendon of the palmaris longus, in the situation where the pulse is felt. It is rarely employed. *The Ulnar Artery* may be commanded by pressing the flexor ulnaris against the ulna. This is less employed than the operation just mentioned. *The Collateral Digital Arteries* may be compressed in their whole length at the union of their anterior surfaces with their sides.

* The object of this was of course to exert pressure upon the course of the artery, and the opposite part of the limb, without compressing all its surface.—T.

* One cannot help feeling much surprised at this observation. Cannot any one command the pulse of his own wrist by pressing the subclavian artery on the rib?—T.

3. Arteries of the Trunk.—The Abdominal Artery.—This may be compressed with success upon the lumbar vertebræ, chiefly in thin subjects, by placing them in such a position as to relax the abdominal muscles, and pressing them strongly with the thumb or fingers, or (what is still better) with a pad applied transversely over the course of the artery. We may thus correct uterine hæmorrhages, or gain time to tie the iliac arteries, when injured.

The Dorsalis Penis.—This is easily compressible at the base of the penis, with the fore finger placed below and the thumb pressing from above.

4. Arteries of the Inferior Extremity.—The External Iliac.—It is compressible through the walls of the abdomen, against the edge of the upper opening of the pelvis. The pressure should be directed somewhat obliquely outwards; but it should only be employed when we are unable to compress the vessel lower down. The *femoral artery* may be compressed on the pubis by the thumb, alone or furnished with a pad, against the ilio-pectineal eminence. It should be remembered that this eminence is inclined forwards and downwards at a variable angle. Hence the pressure should fall somewhat obliquely on the artery downwards and backwards, forming with the horizon an angle of 45 deg. The compressor of M. Dupuytren may also be employed, and even the tourniquet of Petit, with some precautions. Compression on the pubis is sure, easy, and much employed. The same artery may be compressed *as far as the lower third of the limb*, by pressing it against the femur with the fingers, tourniquet, compressor, &c. Care should be taken that whatever means we use should flatten the artery against the bone. The *popliteal artery* may be compressed opposite the articulation, with the fingers or tourniquet; the latter is preferable, on account of the mass of cellular tissue which surrounds the artery. The pressure should be directed from behind forwards. But it is seldom employed in this situation.

SECT. II. HEMOSTATIC PROCEDURES DURING THE OPERATION.

During an operation we have to contend with arterial and venous hæmorrhage. We employ—1. *Direct compression*, which consists in applying the fingers on the mouths of all bleeding vessels, until we proceed to the arterial trunk, or until the operation is finished. 2. By *indirect pressure*, used chiefly in flap operations; here the flap is compressed between the thumb and finger. 3. By *ligature*, which is the same as the method used after the operation, except when, before operating, the great vessels are secured—a mode by which all hæmorrhage is effectually prevented. Pressure during an operation is usually entrusted to assistants.

These methods are applicable to veins as

well as arteries. But we must add that venous hæmorrhages arise from two important causes. 1st. A mechanical impediment to the return of blood towards the heart, as when we use the tourniquet; but hæmorrhage from this cause is immediately stopped when we remove the instrument. 2nd. Violent struggles of the patient, which hinder the passage of blood through the lungs, and cause it to flow back into the venæ cavæ and their branches. This happens especially in operations performed about the neck. It is to be remedied by making the patient inspire deeply, and cease from struggling. Frequently two deep inspirations have proved sufficient to arrest an hæmorrhage which had appeared irrestrainable.

SECT. III. HEMOSTATIC METHODS OF PROCEEDING AFTER OPERATIONS.

Blood may flow after an operation, from the capillary vessels, from the veins, or from the arteries.

I. Capillary Hæmorrhages.—The capillary vessels usually cease to bleed soon after the division, in consequence of the pressure exerted upon them by the retraction of the tissues in which they lie. But in some subjects, whether owing to idiosyncrasy or some morbid diathesis, the blood continues to exude; and, frequently after the hæmorrhage has ceased, and the dressings have been applied for some hours, it will re-appear.

When this occurs, the dressings, if they have been already applied, must be removed; the wound is to be sponged with cold water, which should be squeezed out at some height above it. The bleeding surface should then be left exposed to the air for from half an hour to five or six hours. In the interim we may examine if any uneasiness be produced by the position of the limb, or if any plethora exists which may require bleeding.

Exposure to the air failing, recourse is to be had to the various kinds of styptics known under the names of refrigerants, absorbents, and astringents. The first consist of cold water, wet compresses, ice, evaporating lotions of alcohol and water, or ether and water, or, the most powerful we are acquainted with, powdered camphor placed between two wet rags, and moistened as fast as it evaporates. The second of charpie, sponge, the agaric of the oak—which is to be preferred—or of cobweb, still more powerful; or of substances in the pulverized state, as powdered gum arabic, the fibrine of the blood dried and powdered, or resin. These powders are dusted on the wound, or upon balls of charpie. The astringent styptics are used in powder, as alum; or, in a liquid state, as solutions of sulphate of iron, of sulphate of copper, of alum, of nitrate of silver, vinegar and water, lemon juice, Rabel's water, and the more recent, and at present secret compositions, of Talrich, Binelli, &c.

Caustics have been applied to restrain this

sort of hæmorrhage, only in two instances; the nitrate of silver has been used for leech bites; and the sulphuric acid, applied through a speculum to the neck of the womb, after the excision of that part.

The actual cautery must be submitted to more rigorous rules. Experience shows, 1st. That when the iron is half hot, either from having been permitted to cool, or from being quenched by blood, it adheres to the eschar and brings it away, and the blood continues to flow; 2ndly. That the same adhesion between the cautery and the eschar takes place when the former is applied too long to the wound; 3rdly. That when the eschar is thin it falls off very soon, and the hæmorrhage recommences. Hence these essential conditions—that the cautery should be of a white heat, applied quickly, removed before its redness has gone off; that the surface of the wound should be perfectly cleansed of blood and other fluids at the time the application is made; and that the eschar should be sufficiently thick. If, therefore, the first cautery should only have operated superficially, we may apply a second, observing the same rules*.

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Erratum in our last Number.

At page 733, sect. 1, 2nd column, 23rd line from top, after “ammoniocal pomatum” add an asterisk, as all the note from the words “This preparation” refer to this part; and, in the note, *for* Cyndrett, *read* Gondret, and *for* laves, *read* leaves.

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MEDICAL BOTANY.

IN illustrating the important subject of Medical Botany, we select the most important articles, in alphabetical order, and follow the plan of our best writers on *Materia Medica*. We this week give a plate of the *Aloe Socotorina*, with the natural history and medicinal uses of that valuable medicine.

Plate 2.—*ALOE SOCOTORINA*.

This species is a native of the Cape of Good Hope. It is allowed by De Candolle to yield the best aloes; and Thunberg, upon whose authority this is stated, tells us, that the Hottentots cut off the leaves and arrange them so that the lower serves as a gutter to conduct the juice into a calabash, which is then brought near a fire, and the liquor reduced to one-half. It is prepared at all seasons; but after the rains, the leaves, which in general yield little juice, furnish it more abundantly, but of a weaker quality, and containing less extract.

* I insert these remarks because they are in the original, but I do not believe that any French surgeon at present would apply the actual cautery to a capillary hæmorrhage.—T.

The leaves of every species are collected and bruised, with the addition of water. The expressed pulp is then boiled in water, and the filtered and decanted decoction mixed with the expressed juice. The whole is then heated, which separates the parenchyme. It is again filtered, boiled down to a proper consistence, and poured into coolers while still warm. The upper layer is separated, as being of the first quality, or, as he calls it, *aloes citrin*; the middle layer is the hepatic, or *aloes jaune*; while the bottom is the caballin, or *aloes noir*. We do not, however, think that the genuine sorts can be procured in this way, which would not account for the great difference in smell and taste. It may, however, furnish varieties, sold each under the names of that genuine variety which it resembles in appearance.

Socotorine aloes, which is the most esteemed, is brought, wrapped in skins, from the island of Socotora in the Indian Ocean. It is dark coloured, of a glossy clear surface, and in some degree pellucid; in masses of a yellowish-red colour, with a purple cast; fracture unequal; easily pulverizable; when reduced to powder of a bright golden colour. It is hard and friable in the winter, somewhat plastic in summer, and growing soft between the fingers. Its taste is bitter and disagreeable, though accompanied with some aromatic flavour; the smell is not very unpleasant, and somewhat resembles that of myrrh. It does not produce hæmorrhoidal affections so readily as Barbadoes aloes.

Med. use.—Aloes in doses of two grains or less, is a stomachic, and with this intention is an ingredient of the various *Pilule ante cibum*. In larger doses it acts as a purgative, but its operation is tardy, first manifesting itself eight or twelve hours after it has been taken. It is therefore frequently given at bedtime. It also acts in a small dose, and hence is conveniently given in pills, which obviates the bitter taste. Wedekind thinks that its primary action is not upon the intestines, but upon the liver; and hence it is to be used whenever we wish to increase the secretion of bile, and correct the atony of the liver. It is particularly useful to persons who lead a sedentary life.

Aloes is a bitter stimulating purgative, exerting its action chiefly on the rectum. In doses of from 5 to 15 grains it empties the large intestines, without making the stools thin; and likewise warms the habit, quickens the circulation, and promotes the uterine and hæmorrhoidal fluxes. If given in so large a dose as to purge effectually, it often occasions an irritation about the anus, and sometimes a discharge of blood.

It is frequently employed in cases of suppression of the menses, or of the hæmorrhoidal discharge; but it is particularly serviceable in habitual costiveness, to persons of a phlegmatic temperament and sedentary life,

and where the stomach is oppressed and weakened. For its use in typhus fever, scarlatina, cynanche maligna, marasmus, chlorosis, hæmatemesis, chorea, hysteria, and tetanus, Dr. Hamilton's excellent work on Purgatives may be consulted. Aloes is also used as an anthelmintic, both given internally and applied to the abdomen in the form of a plaster. Dissolved in alcohol, it is employed to check hæmorrhagies in recent wounds, and as a detergent in ulcers.

From its warmth and activity it is accused of causing colic pain, bloody stools, and other hæmorrhagies, and has been proscribed in persons of a plethoric, nervous and dry habit of body, in pregnant women, and in fevers and inflammations generally, yet it is often given in these with advantage.

Aloes is administered either,

a. Alone, or

b. In composition : with purgatives, as soap, scammony, colocynth, rhubarb ; with aromatics, as canella ; with bitters, as gentian ; with tonics, as iron, myrrh ; with fetids, as assafœtida.

It is exhibited in the form of

a. Powder ; too nauseous for general use.

b. Pill ; the most convenient form.

c. Solution in water, wine, or diluted alcohol.

Dose.—The effect of aloes is by no means proportioned to its dose, so that a few grains operate nearly as well as several times the number. Five, ten, or fifteen grains may be given in a single dose as a purgative, but against a costive habit two or three grains daily will generally suffice. Corresponding quantities may be given in solution, and the action is more speedy. Some foreign therapeutists assert, but connected with a hypothesis as to its mode of action, that aloes has absolutely no effect when thrown into the rectum as a clyster.

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The London Medical

AND

Surgical Journal.

Saturday, July 25th, 1835.

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NOTHING OF A LEADER.

THE use of leaders, we conceive, is to lead people by the nose ; but the difficulty is to find *strings*, for the journalist who had *hands* enough to do the public this service had need to be an infinitely improved development of Briareus : we are accordingly often

obliged to spin long *yarns* out of rather deficient materials. We are at the present moment in this embarrassing predicament ; we have nothing to say. Things are really monstrous dull !

Warburton's reform is out of breath, and is lying down to rest itself, and the parliamentary evidence has become a drug—every body is dead of it. We have reduced all inimical journals to fragments, and chaunted their dirge—like Faust's devils

Wir tragen

Die trümmern in's nichts hinüber,

Und klagen

Ueber die verlorne schöne.

or, as A. Hayward Esq. judiciously renders it—

We bear away

The wrecks into nothingness,

And wail over

The beauty that is lost.

Our numerous friends and correspondents are all either deceased or struck modest—at least we hear nothing of them. In short we are fairly aground waiting for the tide.

—“fere sicco subductæ litore puppes”
(puppies).

Were it not for a delightful facility which we possess of writing about nothing, the Original London Medical and Surgical Journal would this week be leaderless—thereby occasioning a breach in nature.

We first acquired this knack in order to confute the twaddle of *ex nihilo nihil*, when we were engaged in composing a new system of the universe ; but we have since found it of excellent service on more occasions than one.

The substantialists may talk how they like, but *oudenology*, so we shall name it, is a very important branch of science—without its aid, some of the most celebrated medical works of the day would collapse into atoms !

—o—

WE are not sorry to find that Mr. Andrews has been elected President of the College of Surgeons. The conduct of

this gentleman, as surgeon to the London Hospital, has evinced a straightforwardness, and aversion to humbug, which inclines us to hope that the influence with which his new office may invest him, will be exerted for the correction of abuses, and the good of the profession.

We would exhort him on his inauguration, as the King is exhorted when he is crowned, to take good care of the people committed to his charge—that is of the *subordinates*—he need not to trouble his head about the council, who know very well how to take care of themselves.

By his *charge*, also, we beg him to understand, we do not mean the charge of two-and-twenty pounds sterling for a diploma—the latter is in no danger of being neglected.

—o—

We understand that the reading room about to be opened for the use of the members of the College of Surgeons is to be lined with iron, as a safeguard against fire—a judicious precaution. We have heard it hinted that the senate have been moved to this by the apprehension, that the members may come in the evening in a state of ebriety, and with cigars in their mouths, thus placing the edifice in danger from the “devouring element”—for our own part we think the college is in more danger of being devoured by the council itself, than by anything else. While on the subject of metals, we may suggest that the *council chamber* might, with considerable propriety, be lined with *brass*—it would not be expensive, as the council are well known to be very rich in that commodity.

—o—

THE EVILS OF DISPENSARIES DEVELOPED.

To the Editor of the London Medical and Surgical Journal.

SIR—The ability and ardour with which you advocate the interests of the medical profession, entitle you to the general confidence

thereof; and being thus impressed, I address you under the conviction that you will neither turn a deaf or fastidious ear towards an object at once important to humanity and medical men, as both have suffered to an incredible extent, by false views and selfishness, to be hereafter detailed. Let me here call your attention to the dispensary system—a system frequently injurious to the poor, as at these institutions the needy are deluded by hopes of relief, not to be obtained thereat, and medicine is thereby degraded and injured. Under any state of the profession, these establishments must be highly injurious; but in its present depressed condition, they inflict much evil on the medical man and his family. In proof of this proposition, let me here call your attention to the immense sums raised by voluntary subscription within the circle claimed by the College of Physicians as their province of inspection, and we shall then see the great injury inflicted by these institutions. If we state the sum annually raised to secure medical exertions, within the circle just adverted to, at one hundred thousand pounds, such a calculation will be under the mark, but of which revenue the medical man receives not one fraction; and what is still more extraordinary, these gratuitous exertions on the side of the physicians and surgeons, instead of contributing towards the advancement of their professional fame, are often injurious to it. This is not surprising to those who know the vast numbers who subscribe to these institutions on selfish motives, and who also, on similar principles, mingle in the management of the affairs of a parish, as from these two sources, namely—gratuitous medical assistance, and the poor rate—they are enabled to secure the payment of rents by their tenants, which would not otherwise be obtained. The dispensaries perform the duties of the parish surgeon to a great extent, and therefore no medical man should be allowed to unite the offices of a dispensary and parish medical officer, for reasons that are obvious. The dispensaries, as at present constituted, are an absolute nuisance, and, as observed, singularly injurious to the poor, because not admitting them to immediate relief when labouring under disease; and these institutions also assuredly subtract from the just claims and respectability of medical men who are regularly educated. Your exertions and admonitions have produced the most beneficial effects, in many ways, to the cause of humanity—but these admonitions, so clearly and fervently demonstrating the incalculable mischiefs arising out of such institutions to medical men and their families, have not been duly attended to. A meeting, therefore, of the profession on the subject of dispensaries, would be of admirable utility at the present juncture, as it would bring this system, so vile, in many of its parts, under the eye of the profession, and the nation at large. The receiving rooms of

Hospitals and dispensaries, into which diseases of a highly contagious nature are daily admitted, become the sources of direful evil to the community, because from thence, as from a centre, infectious maladies of a most inveterate character are diffused over every part of the nation where they exist, and thus they become the sources of great expense and tragical events, as the consequence of domestics conveying these fatal diseases to the highest circles. The history of dispensaries, from which medical men, as well as the poor, suffer most severely, would excite the astonishment and indignation of every generous mind, as the medicines dispensed thereat are often of bad quality, and generally carelessly compounded—seldom does it happen that the prescriptions of the physician or surgeon are made up as prescribed. In defiance of all your exhortations, these institutions, lamentable to behold, still continue to be sought after by medical men, to their own degradation. Those frequenting dispensaries for relief may be divided into three classes. Firstly, those actually poor; secondly, the dependents and servants of wealthy and noble personages; thirdly, those who take an improper advantage, under varied pretexts, of those institutions, rather than pay for medical assistance. In placing the above imperfect outline under your consideration, there is certainly nothing in its character which ought to induce medical men to gratuitously devote their capital—which their professional talents are to be considered—to such institutions, because on every principle of justice they ought to be rewarded for their services. Indeed, it is the duty of the governors, if honest men, to insist on such a measure being adopted—the paupers ought to be paid for by the parish, which arrangement would be useful to some member of the profession—the rich ought to pay for the medical assistance given to their friends, dependents, and servants, and the industrious man should contribute according to his means, for the relief given to him, when labouring under disease. Does the lawyer or the clergyman give assistance gratuitously to either poor or rich? Does the grocer, the baker, the brewer, the butcher, apply his goods to the support of those institutions? Certainly not; because they are well aware that if they were to do so, they would be considered as disgracefully inattentive to the interests of their families, if not maniacs. Medical men are at once the foundation and sources of utility of these institutions, so that they are to be regarded as labouring to their own injury, as the patients cured thereat yield no remuneration for the services conferred on them. It is truly lamentable to observe people of wealth assuming the mask of liberality, generosity, and charity, by subscribing to these institutions under the ostensible pretence of serving the poor, when in reality they have no other object in view, but that of benefitting themselves

by obtaining medical assistance for their relations, servants, and dependents, for whose relief they ought to pay; and in not doing so, they subject themselves to the imputation of hypocrisy and extreme meanness. Dukes, duchesses, marquises, earls, marchionesses, barons, lords, ladies, baronets, and men of wealth, pass before the eyes of medical men at these institutions, as portrayed through their valets, butlers, poor relations, dependants, and ladies' maids. It is a duty which medical men owe to themselves and their families, to insist, at the expiration of each year, on a certain portion of the funds of these institutions being devoted to their remuneration, instead of accumulating in the hands of bankers, and being often applied to unworthy purposes; and should a demand so reasonable be refused by the governors, the medical men should instantly resign their situations, and commence an establishment under their own guidance and authority. By such an arrangement at their own abodes, medical men would be enabled to accommodate their charges to the circumstances of their patients, and thereby become the friends of industry and independence of mind; and by thus divesting themselves of undue selfishness, they would be regarded with gratitude and esteem by rich and poor.—I have the honour to be, Sir, your obedient humble servant,

INDUSTRIÆ AMICUS.

July 20th, 1835.

—o—

Summary of Orfila's Observations on the changes which occur in the Tissues of Dead Bodies after Interment. Appended to Sédillot's Manuel de Médecine Légale. Translated from the French, for this Journal.

(Continued from p. 760.)

THE various colorations of the gastro-enteric mucous membrane exist in middle-aged as well as in old persons, though they are less numerous in the former. If the individual has died suddenly during the process of digestion, of a disease not affecting the intestinal canal, the inner coat of the stomach is usually of a rose colour, while that of the intestines is gray, ash-coloured, or white, with or without yellow patches. The coloration of the inner surface of the alimentary tube may, on the other hand, be deeper and more varied, if death has not occurred during digestion, and has not been sudden, although the disease has not been of a nature to alter directly the tissues of the stomach and intestines.

We will conclude this rapid sketch of the different states in which the intestinal canal may be found previous to inhumation, by some remarks on the cadaveric lividities of this canal. It is well known that red, livid, or black spots, large and irregular, resembling those seen on the skin of dead bodies

are not unfrequently found under the serous membrane in the tissue of the part: these patches occupy the part of the digestive tube which was most dependent when the body grew cold; they arise merely from the stagnation of the blood and its accumulation in the capillaries, and are not to be regarded as traces of inflammation. The two following observations will place this fact beyond a doubt.

1. On opening the abdomen of a person who died suddenly of apoplexy, and who, a short time before, was in perfect health, it was found that all the convolutions of the intestines which occupied a superior position, as also the portion of the stomach that was visible, were remarkably pale: no redness was perceptible, except in the most depending part of each convolution, and the venous congestion was nowhere so great as in the portion of the ilium contained within the pelvis. The mucous membranes of the stomach and bladder were red at their most depending part. *The body had remained in the supine position: the dissection was made twenty-four hours after death.*

2. The body of a young soldier, who had died of acute pneumonia after a short illness, was placed on its belly immediately after death, and kept in this position till the dissection, which took place on the following day. The cadaveric lividities of the skin appeared on the face, chest, belly, and anterior part of the limbs; those portions of the stomach and small intestine which were in contact with the parietes of the abdomen presented the tints of rose, red, and violet, usually observed in the intestinal convolutions which occupy the pelvis and the sides of the vertebral column, while the latter parts and the posterior portion of the stomach and bladder were exceedingly pale. (Trousseau, *Dissertation Inaugurale*. Paris, 1825).

Let us now proceed to describe the different states of the alimentary canal which we have observed in bodies disinterred a longer or a shorter time after inhumation. What has been already stated demonstrates the difficulty, not to say the impossibility, of determining that the colorations, and even the ramollissemens, of which we are about to speak, have arisen after inhumation, because we know that they occur in dead bodies before they are interred: we shall also confine ourselves to a description of what we have seen, without pretending to establish, with reference at least to the stomach and intestines, what may be the necessary effect of long inhumation.

The mucous membrane of the *mouth, velum palati*, and *tongue*, are at first green and evidently softened; the colour progressively deepens till it becomes black: all these parts dry up, and at the expiration of some months we find, in the place of the tongue, nothing but a very thin and dry membranous appendage.

In the early periods the lining membrane of the *œsophagus* was of a green colour, more or less intense, especially at its upper part; for, at the lower, it pretty soon assumed a reddish colour: sometimes, also, the green of the upper portion were spotted with red and violet. In some old persons we have found, in the interior of this musculo-membranous canal, a number of small varicose tumours, filled with black fluid blood; this was evidently not a cadaveric change, but a morbid lesion. At a more advanced period, the *œsophagus* became browner and browner, and was destroyed in the same manner as the stomach, of which we are about to speak.

Stomach.—This viscus generally contained only a very small quantity of fluid. At first its mucous membrane was yellowish, of a rosy colour, grayish, blueish gray, or bottle green; occasionally these tints were spotted with red and violet; near the pylorus it usually presented a blueish patch of larger or smaller size, more deeply coloured than the rest. Later than this, it was raised at certain points by bubbles of gas of the size of a pin's head, or something larger. By this time it had acquired a rosy colour, which afterwards changed to a violet red, and it was lined with a thin coating of a bistre, or diluted mud coloured liquid.

At a still more advanced period it was of a whitish gray, with numerous blue spots, but without any appearance of redness; the stomach having already become considerably softened, underwent a rapid change, and soon after only part of it was to be found, resembling a portion of a hollow cylinder: it was next reduced to a dry laminated mass, separable into coralliform filaments; and finally into a black humid matter, like the grease of a cart wheel, covered here and there with small globules of white or greenish mould, and with patches much resembling the lichens found on the trunks of old trees. Several months after inhumation, the three coats of the stomach might still be separated; the muscular and serous, did not always present the same colours as the mucous; at first they were generally of a grayish or yellowish tint, then rosy, and lastly grayish: the parts of the serous membrane in contact with the liver and spleen, were occasionally reddish, especially at an early period.

Intestines.—The intestines were at first of a gray colour; sometimes slightly reddish externally, and grayish internally; in some cases, however, the mucous coat was rosy or violet coloured in certain parts, and yellowish where it was tinged with excrementitious matter. Later than this the intestines diminished in thickness; they began to dry up and adhere to each other, they then became brown and still further desiccated, and their parietes were gradually more and more incorporated, so that they could hardly be disunited: they thus formed a mass closely

applied to the vertebral column; the fecal matter was for a long time distinguishable; finally the intestines underwent the same changes, and the same destruction as the stomach.

We will inquire elsewhere whether the changes induced by putrefaction in the intestinal canal, are liable to be confounded with the effects of inflammation; suffice it to observe, at present, that long after death, when all traces of the thoracic viscera have disappeared, some cylindrical portions of the intestinal tube are generally to be found, in the cavity of which it might be possible to detect the remains of a poisonous substance.

Epiploa.—The epiploa and the mesentery at first become of a rosy or gray colour, and are softened; soon after they lose their flexibility, and have a tendency to be converted into adipocere: after this they remain for a long time without undergoing any remarkable alteration.

Liver.—The changes in the liver commence with softening and the conversion of its colour to a deeper brown. The peritoneal covering is easily detached, and is soon partially destroyed. In a few weeks the natural structure of the liver can no longer be recognised; the two substances of which it is composed are no longer to be detected; but the great vessels are still easily distinguishable, and are often lined internally with a sanies of a deep wine-lee colour. At a later period, sandy granulations of phosphate of lime are found on the surface of the liver, and in some instances soft white granulations, evidently composed of adipocere, are discovered in the interior of the vessels. Still later, the liver is reduced to a flattened mass, about half an inch thick, of a blackish brown colour, slightly desiccated, and which, on being incised, is divisible into layers, between which there is a solid, brown, bituminous-looking matter; this mass, flattening more and more, finally becomes black, coralliform, and separable with the smallest effort. Sometimes, instead of undergoing this desiccation, the liver is converted into a soft blackish matter, resembling the grease of a cart wheel—a kind of *bouillie*—in the midst of which a yellow matter, of a fatty appearance, is discovered.

Gall Bladder.—This organ is found to preserve its natural appearance at a time when the liver has undergone considerable changes; it is empty, or contains bile of a thick consistence, and olive green colour.

Spleen.—This very soon becomes soft, and easily lacerable; it grows more and more brown, and its natural texture is speedily lost: soon after it is reduced to a blackish pulp, like the grease of a wheel, or the mud of a gutter, and this impregnates the neighbouring parts, and communicates its colour

to them. Finally, it often becomes quite fluid, resembling decomposed blood, and is no longer to be recognised but by its situation.

Pancreas.—The earliest change undergone by this organ is softening, it then becomes of a grayer colour, and is eventually transformed into a pulp, at first grayish, but gradually assuming more and more of a brown.

Urinary Organs.—The kidneys do not soften so quickly as the spleen; they, however, soon lose their consistence, and their investing membrane is easily detached. The pelvis and infundibula are easily to be recognised after the cortical and tubular substance have ceased to be distinguishable. Finally, these organs are converted into a brownish pulp, and disappear.

The bladder undergoes no remarkable alteration for several weeks; sometimes, however, air is disengaged under the mucous coat. At a more advanced period it contracts, and exhibits nearly the same changes as the intestines: traces of the latter, however, are often found when the bladder has entirely disappeared; this arises from its vicinity to the anus.

Genital Organs.—At an early period these organs, though softened, preserved their shape; the corpora cavernosa soon became collapsed. Later than this the penis is flattened, resembles an eel skin, and has quite lost its natural appearance. The scrotum, which at first is sometimes excessively distended with air, gradually dries up; the testicles diminish in volume, acquire a wine-colour, and are transformed into fat. Still later, the penis resembles a tube of a firm consistence, whose parietes are in contact, and being separated, give it the form of a hollow cylinder. By this time the scrotum and testicles are replaced by a soft, brown, moist substance, presenting here and there membranous layers, and covered with a viscous blackish envelope, and by many worms. At a still later period the destruction of the genital organs is complete, and the sex can no longer be distinguished by inspecting them, although the pubis is still covered with hair, which is matted together with the foliated and carbonaceous mass to which the soft parts have been reduced. In the female, the external organs of generation after being softened, are converted into a shapeless foliated mass, by which the sex can no longer be discriminated. The uterus also becomes soft; it is flattened, and so altered in its form, that by the end of a few months it is only recognized by its situation. The fallopian tubes and the ovaries disappear pretty early; the broad ligaments offer greater resistance to putrefaction, and assume a grayish colour.

(To be continued).

Hospital Reports.

ST. GEORGE'S HOSPITAL.

*Fatty Tumours; Removal of Two by Operation;
Clinical Observations on.*

SIR BENJAMIN BRODIE lately removed two fatty tumours, one of them from a male, and the other from a female patient, both of which were seated over the shoulder.

After the patients had left the operating theatre, Sir B. Brodie observed that there were several distinct kinds of fatty tumours, and of the first form he should mention, both those now removed were examples. They consist of collections of fat not precisely like that of the healthy adipose tissue, but of a finer and more delicately granular kind, and enveloped in a strong capsule of membrane, which forms distinct cavities for different portions of the fat, so as to give the tumours lobulated appearance*. The contained fat adheres closely to the parietes of its capsule, but the latter possesses but a lax connexion with the surrounding skin and other structures, through the medium of a delicate cellular tissue. This is the case particularly during the early period of the growth of the tumour, and pervades its entire surface, except at one point, where the principal nutritious vessels of the tumour enter. This form of fatty tumour I believe only to occur in such parts as naturally possess a quantity of healthy fat; thus I have never known it occur in the penis, scrotum, or prepuce, whilst it is common about the neck.

Occasionally I have known this variety of tumour to be ascribed to an injury; thus in two cases they were noticed to commence after blows on the part, and when first discovered were not larger than walnuts, but gradually increased to a very considerable size. These tumours do not occasion any pain, nor other inconvenience, save that arising from their bulk. They ought, however, when large, to be removed by the knife, as they are liable to undergo changes highly detrimental to health. Thus they may become the seat of inflammatory action, an abscess may form in their centre, discharging pus mingled with an oily fluid, which often operates as a severe drain on the constitutional powers, and proves a source of great general irritation. In other cases, I have known them undergo a malignant degeneration, and assume the character of medullary sarcoma, which may again become a bleeding fungating ulcer.

The only effectual mode of treatment is to remove them with the knife, which is readily accomplished in the following manner:—An incision should be made through the integuments into the substance of the tumour, and then the line of separation be-

tween the skin and the capsule made out; and by commencing at this point, the tumour may almost be turned out by the finger and thumb, or by the handle of the scalpel, requiring only the actual use of the knife at the point where the vessels enter. A little bleeding will occur on their division, and it is generally advisable to employ a ligature or two. Care should be taken to remove the whole of the disease, which is readily effected by conducting the dissection externally to the cyst. Should, however, a nodule or two remain after the removal of the mass of tumour, they must be taken away, or the tumour is very liable to return. This, you would observe, I found necessary in the operation which I just performed.

In the next form of fatty tumour, the structure of which it is composed does not differ much from the surrounding healthy and normal adipose tissue, and as it is not contained in a regular capsule, the line of demarcation between the tumour and the fat in which it is formed is scarcely distinguishable. The fat of which such tumours are composed, is, however, on the whole, somewhat denser, and of closer texture than healthy fat†. I have seen one case in which a tumour of this kind involved very extensively the neck and shoulders, producing great deformity, and from this cause, unfitting the patient for his employment, as servant in a gentleman's family. In a case of this description, the use of the knife is out of the question, and I, therefore, gave a trial to the internal use of the liquor potassæ, and I was greatly gratified by the tumour entirely disappearing under its use. In another case, after the tumour had partly yielded to the liquor potassæ, without any general emaciation having been produced, I changed the remedy for the iodine, then first coming into notice; but under its employment, the patient became emaciated, and the tumour became larger, rather than the contrary; I therefore left it off, and returned to the potassa, which was speedily successful in ridding the patient of the disease. I regard this variety of the tumour to be completely under the control of this remedy, given in large doses; as, for instance, one drachm three times a day. I find beer a very good vehicle for its administration.

There is another form of fatty tumour, not obtaining a large size, but which is found to occupy every part of the body, in such numbers as to preclude the idea of extirpation. These, likewise, yield to the use of the caustic alkali, and are thus entirely got rid of. In one case of this kind, I requested Mr. Cutler to remove one of the tumours, and it was found to consist of a harder and more granular tissue than healthy adipose.

The fourth and last form of fatty tumour with which I am acquainted, is very uncommon.

* The encysted steatomatous tumour of Abernethy.

† The adipose sarcoma of Abernethy.—

mon; in extensive practice it may perhaps be met with once in fifteen or twenty years; its peculiarity consists in being of a regular conical or ovoid form, and in being complicated by the presence of an adventitious serous cyst, which surrounds the tumour just as the tunica vaginalis does the testicle. The only remedy for this variety of tumour, I believe to be extirpation.

—o—
NORTH LONDON HOSPITAL.

*Clinical Remarks on a Case of Irritable Stump.
Amputation by Mr. Liston.*

GENTLEMEN—The changes which occur in a stump are the following:—It shrinks more or less, there being absorption of the muscle; and, frequently, when the bone is not well covered, or only covered by a thin pellicle of skin, it becomes quite conical, from the same process going on; the vessels become smaller, impervious, and like cords. In order to allow the integument to move well over the bones, nature often forms the cellular tissue into a bursa mucosa. These are the changes taking place when the bone is well covered, when otherwise, necrosis may occur; indeed, in badly performed operations, it often happens that sequestra of three or four inches are found. I need scarcely say such a circumstance is not creditable to the surgeon who performed the operation. The extremities of the nerves do not, however, shrink in this way, but they frequently enlarge, sometimes to a very great extent, causing intense pain and irritation. I once performed the operation of amputating a stump on a man who had three times before submitted to the knife, but who suffered from these neuralgic pains, arising from the pressure of the nerve against the bone: this was the case with the man, Daly, whom I operated on the other day; but in addition to this pressure, the bone had become adherent to the cicatrix. The history of the case is interesting. He was admitted June 30th; about four years since his hand was severely lacerated by a stone falling on it. He was immediately removed to one of the hospitals, which he left in about four months after, with his hand in a very bad state. He had subsequently been under the care of several surgeons, the last of whom amputated the limb about three years and a half ago; the stump was a long time in healing, and since then he has suffered at all the vicissitudes of the weather; his pains were so great on his admission, that he begged the stump might be immediately removed: he was unable to follow his employment: he was deprived of natural rest; and his health had consequently been much impaired. I performed the operation in the following manner:—I formed a flap of sufficient size on the dorsum of the fore-arm, by commencing an incision over the edge of the ulna, and carrying it downwards, and then upwards, so as to make it terminate

over the edge of the radius, at the opposite point to where the incision was commenced on the inner side; I then passed the knife across the anterior aspect of the arm, from the termination of the last incision to where it had commenced, and by cutting from within outwards formed a flap corresponding to the other; to prevent the nerve from again becoming troublesome after the wound had healed, I removed about an inch more of the median nerve than was taken away with the stump; it was then dressed with our common isinglass dressing, having employed a single suture; since that time he has been going on very well; we have, however, had occasion to give him a few purgatives and diaphoretics to keep down a slight tendency to inflammation. The stump is now nearly healed, he complains of no pain, and talks about going out. I think the flap operation superior to all others. I believe it gives a much better covering to the bone; the wounds are generally very healthy, heal quick, and are clean. Previous to performing this operation, I had considered it possible that the patient might have been relieved by simply removing the enlarged extremity of the median nerve; had it been a well formed stump, I think I should have tried such a proceeding, though there is always danger in exposing the bone; but in this instance, as the stump was so badly formed, and so thinly covered by integument, I made up my mind to improve the stump, as well as relieve the man of his pains. You will be called on to perform operations of this kind under various circumstances; sometimes the stump may be left so long as to be seriously inconvenient to the patient: if it be a leg, and he uses a machine, the stump may come into contact with his clothes, and be very troublesome: you will then have to shorten it. Badly performed operations, also, sometimes produce the necessity for this proceeding. I once removed a stump in which the tibia was left some inches longer than the fibula. It is not always requisite for you to go through all the steps of the operation; it occasionally happens that you can remove a portion of the bone and improve the stump, by making an incision on the inner side, and drawing aside the flap.

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Chronic Rheumatism, treated with Hydriodate of Potash.

RACHAEL MITCHELL, aged thirty-two, was admitted May 26, under the care of Dr. Elioton. About eighteen months ago she caught cold, and has since then suffered considerably with rheumatic pains in the joints, at every change of weather. There is no swelling or heat of the parts affected.

Rx. Hyd. potassæ, gr. iijss;
Aq. puræ, 3j, ter die.

June 4th.—The pains of the joints are better, but she has had a little sickness and headache.

20th.—Has been taking the medicine in gradually increased doses since last report. She now takes seven grains and a half of the hydriodate three times a day. She is improving rapidly, the pains being almost gone.

23d.—Discharged, well.

Dr. E. has employed the hydriodate in another case—that of an old woman, who had suffered for twelve months with a severe rheumatic pain in her neck. She took the hydriodate for six weeks, and was completely relieved.

Amenorrhœa.

The following formula has been used in the North London Hospital by Dr. Elliston, in cases of amenorrhœa, with the most decided success.

Rx. Ol. Tereb. ʒss.
Decoct avenæ, lbj.

Ft. enema quotidie.

It is well to mention, that a small quantity of blood was taken from the arm in each case. The injection in one case produced menstrual discharge in four days, though it had been absent four months. In another case the patient was relieved in seven days. Dr. E. has employed it in one instance without any benefit.

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ROYAL COLLEGE OF SURGEONS.

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Mr. Andrews has been elected President, and Sir Astley Cooper and Sir Anthony Carlisle were elected Vice Presidents for the ensuing year.

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STIMULANTS OF GREAT MEN.

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It is interesting to notice the different articles which have been taken, by eminent men, as stimulants to the mental faculties. It is interesting, as showing how diametrically opposite means may produce the same effect in various systems; and it is interesting, as showing how much the mind sympathises with the body. Haller drank plentifully of cold water when he wished for great activity of the brain; Fox, for the same purpose, used brandy. The stimulants of Newton and Hobbes were the fumes of tobacco; those of Pope and Fontenelle, strong coffee. Dr. Johnson, at one period of his life, was a great wine drinker; but, in the latter part of it, found strong tea a good substitute. Don Juan is said to have been written under the influence of gin and water; and it is reported that a certain legal lord, of great learning and talent, plies him-

self well with port when he wishes to shine. Pitt was a great drinker of wine; Sheridan, also, was fond of the bottle. Dr. Paris, in his "Pharmacologia," tells us, that when Mr. Dunning wished to make an extraordinary display of eloquence, he always put a blister on his chest a few hours before the time he was to speak, in order that it might irritate the brain by sympathy during his speech.

C.

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RAPIDITY OF THOUGHT IN DREAMS.

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THE period of time occupied by a dream is generally exceedingly short—sometimes lasting scarcely more than a minute, at others not more than a second of time; and yet, in that space, we seem to have existed for years—to have taken long journeys or voyages, traversed over countries far distant; and to have endured the feelings of pleasure and pain at long intervals of time. De Quincy tells us he seemed to have lived eighty years in one night; verifying the expression of the bard, in his own sweet dream, that

"A slumbering thought is capable of years,
And curdles a long life into one hour."

J. H.

—o—

EFFECTS OF DREAMS ON OUR WAKING THOUGHTS.

—

THAT oppressive feeling of gloom, which we sometimes feel on rising in the morning, and for which we cannot possibly assign a reason, is supposed to arise from unremembered dreams which have brought all the sins of our life in array before us. You will probably remember in one of the letters of the noble poet (Byron), whom I have just quoted, that he mentions how constantly, at one time, this feeling oppressed him for the first hour or two after rising—there is little doubt that it arose from the nature of his dreams. You know how morbidly sensitive he was in mind, and his long continued abstinence from animal food, and the common necessities of life, had made him equally sensitive in his physical construction; he was just the subject to have such a train of ideas arise in his dreams—as to use his own words, would

"Leave a weight upon his waking thoughts."

We have similar facts given to us in the early life of Cowper, written by himself.

J. H.

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